DECEMBER, 1950

Textile Industries

formerly COTTON Textile Industries

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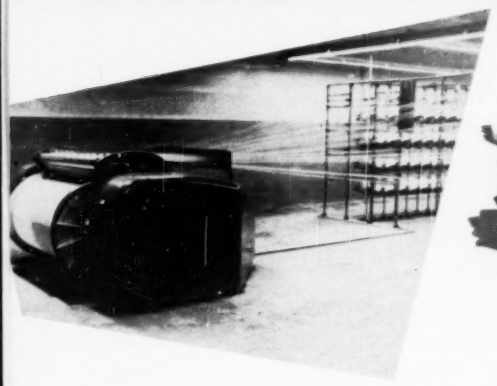


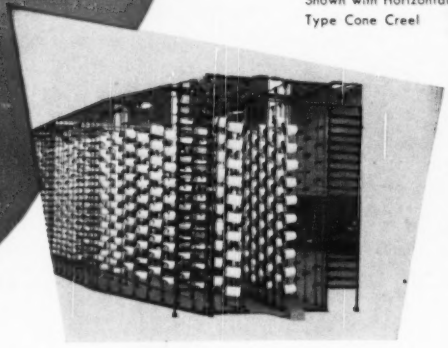
Shown with Vertical Type Cone Creel

Cocker's NEW High Speed Warper

This new Model SD 49 Spindle Driven Warper will handle large section beams with 36" diameter heads 54¼" between heads or wider, as well as beams with smaller diameter heads. Can be run with either horizontal or vertical creels. Weight approximately 9000 pounds. Of rugged construction to withstand operating speeds up to 1000 YPM.

Also equipped with electronic relay stop motion, patented by Deering Milliken Research Trust and manufactured by Cocker

Shown with Horizontal Type Cone Creel



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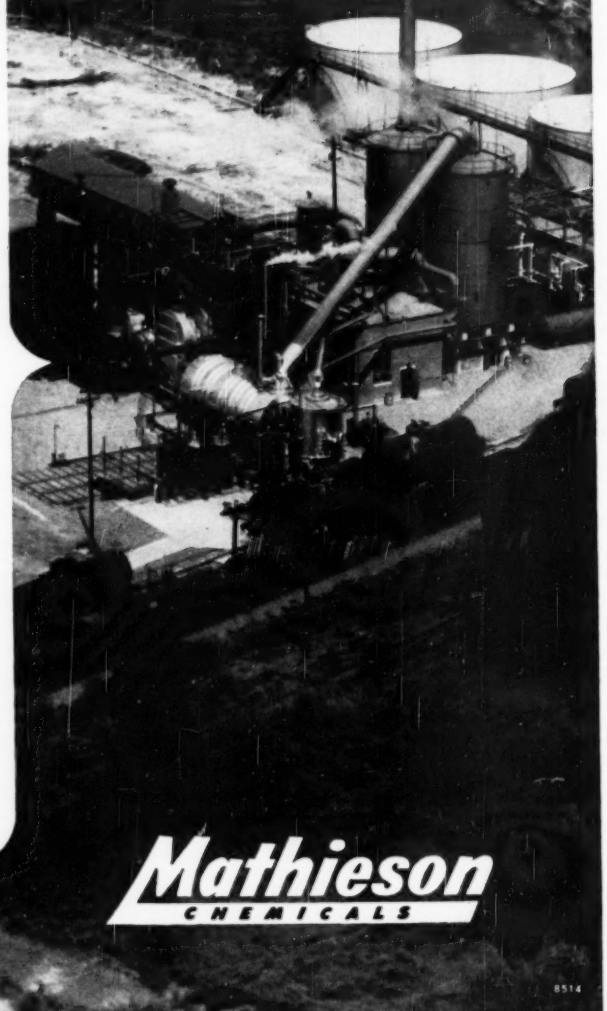

1 **UNIFORMLY HIGH PURITY**—Mathieson Sulphuric Acid is clear, colorless and free from such impurities as arsenic, selenium and tellurium because it is made exclusively from pure elemental sulphur in modern equipment.

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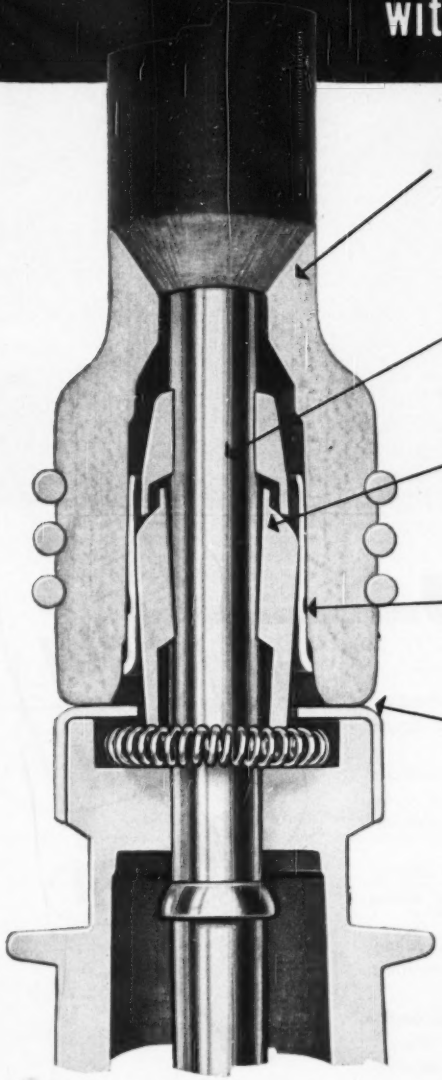
Volume 114 Number 12

Modern CLUTCH SPINDLES and BOBBINS with STIMPSON RIB BUSHING



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Prevents Bobbin "Riding Up"

Stimpson Rib Bushing

Easier Doffing

● Use a modern Draper clutch spindle to reduce your costs and step-up your quality production.

The Draper clutch spindle, used in conjunction with bobbins having the Stimpson Rib Bushing, will give you completely filled bobbins with uniform packages and properly placed feeler bunches. Investigate the Draper clutch spindle and see how you can cut your spinning and weaving costs.

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FOR THE TEXTILE INDUSTRY

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Textile Industries

COTTON

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December, 1950

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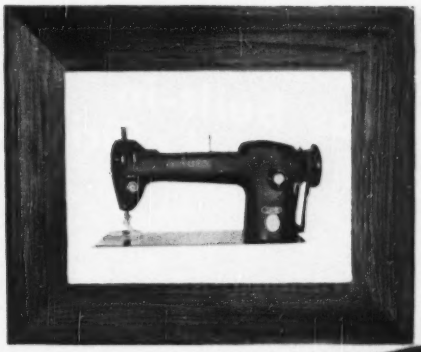

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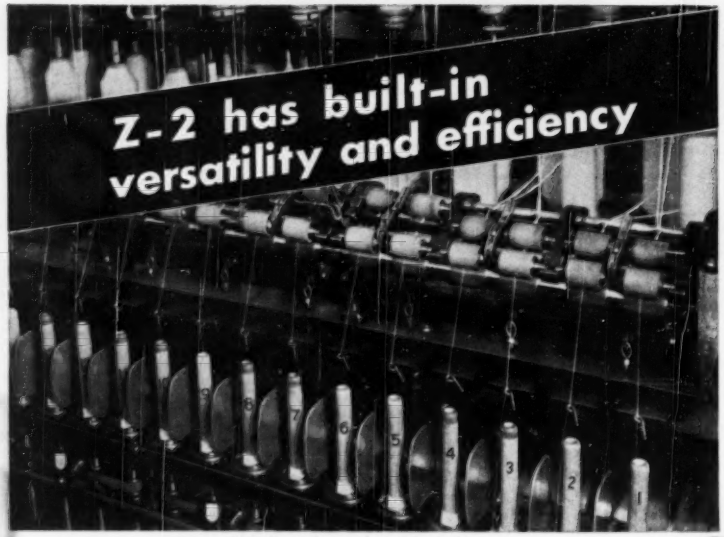

Running 8 stocks simultaneously on 13 spindles.

SPINDLES 1 *and* 2
1⅛" combed Peeler

SPINDLES 3 *and* 4
50% cut wool top 1½" staple
50% 3 denier viscose 1½" staple

SPINDLES 5 *and* 6
50% 3 denier viscose 2" staple
50% 3 denier acetate 2" staple

SPINDLES 7 *and* 8
100% 3 denier Celanese 2" staple

SPINDLE 9
30% 3 denier nylon 3" staple
70% 64's wool

SPINDLE 10
50% 3 denier nylon 3" staple
50% 3 denier viscose 2½" staple

SPINDLES 11 *and* 12
50% 3 denier viscose 2½" staple
50% 3 denier acetate 2¼" staple

SPINDLE 13
100% 64's wool top

For these mills

the adoption of the Saco-Lowell Z System eliminates costly trials and experiments. The inherent flexibility and effective fibre control will facilitate the production of good yarns from any commercial blend known today, with satisfaction and efficiency in operating conditions.

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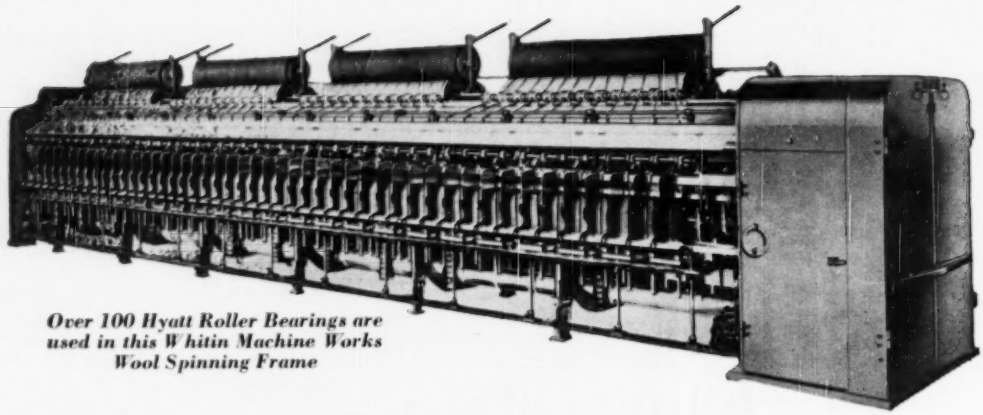
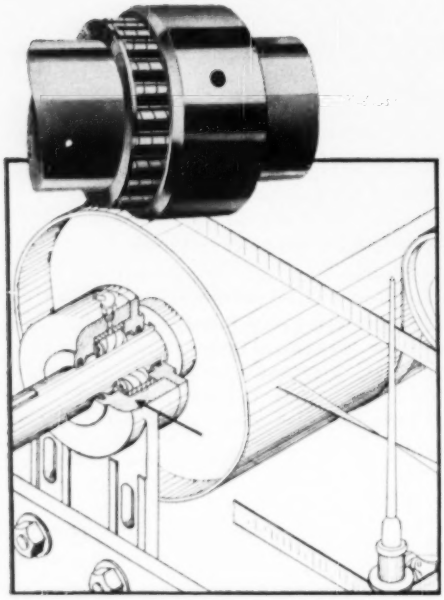


Over 100 Hyatt Roller Bearings are used in this Whitin Machine Works Wool Spinning Frame

HYATTS help to cut costs



Operating and maintenance costs go down—quality of fabric goes up when Hyatt-equipped textile machinery is used in a mill.

Consider spinning frames and twisters for instance. Hyatt Roller Bearings in the cylinders, as illustrated at the left, assure a true, smooth-running, high-speed operation that can be depended upon for continuous performance.

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Hyatts save in power and lubrication—and yarn is kept cleaner

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for take-ups and adjustments

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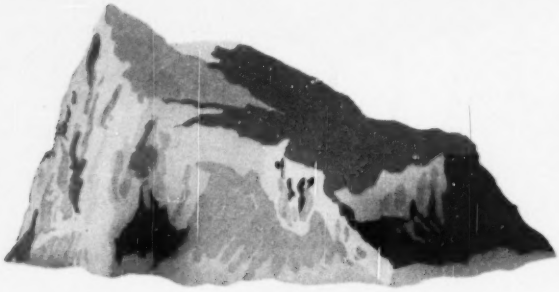

A FOUNDATION SOLID AS GIBRALTAR

TO the seasoned veterans of the Textile Industry, STE-HED-CO Products need no introduction. These products have long played a leading part in the scientific advance and development of weaving—they have been associated with every modern weaving accomplishment for the past half century.

To the younger generation, the new faces in the industry, the Quality of STE-HED-CO and SOUTHERN Products will be a revelation. This QUALITY immediately reflects itself in product performance . . . and PRODUCT PERFORMANCE explains the enviable world-wide reputation STE-HED-CO and SOUTHERN Products enjoy.

STEEL HEDDLE leadership has been constant over the years. It began in 1898, when in a small plant on the outskirts of Philadelphia, Pa., the company foundling fathers pledged themselves to obtain through research and experience, the knowledge to manufacture ONLY products of superior quality to assure more efficient production at a more economical cost. A tradition adhered to during STE-HED-CO and SOUTHERN'S entire business history.

From its modest beginning, when the now famous "FLAT STEEL HEDDLE" was first introduced to replace the then universally popular Cotton Harness and Round Wire Heddle, the company has pioneered in every stage of weaving and has consistently inaugurated new and better methods for handling yarn in its process before weaving.

SOUTHERN SHUTTLES, organized in 1931 to round out a complete line of TEXTILE ACCESSORIES, is a Division of the Steel Heddle Mfg. Co. This Division, housed in its own air-conditioned plant, is designed, constructed, specially equipped and fully staffed to exclusively produce the world's finest and most durable Shuttles. And . . . Southern Shuttles has sponsored and pioneered all major shuttle improvements.

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Today, possessing over 200 U.S. Patent grants, and with five large plants in the U.S.A. and Canada, the company is justly proud of its many contributions to the industry.

Space won't permit listing them all, but hereunder are just a few STE-HED-CO and SOUTHERN achievements . . . Their contributions to Textiles.

1913 1917 1916 1919 1918 1915 1914 1912 1911 1910 1908 1909 1907 1903 1904 1899 1900 1902 1901

SLIDE HOOK FRAMES • DOUBLE BAR FRAMES • ALUMINUM FRAMES • FLAT STEEL DOUP HEDDLES • DUPLEX HEDDLES
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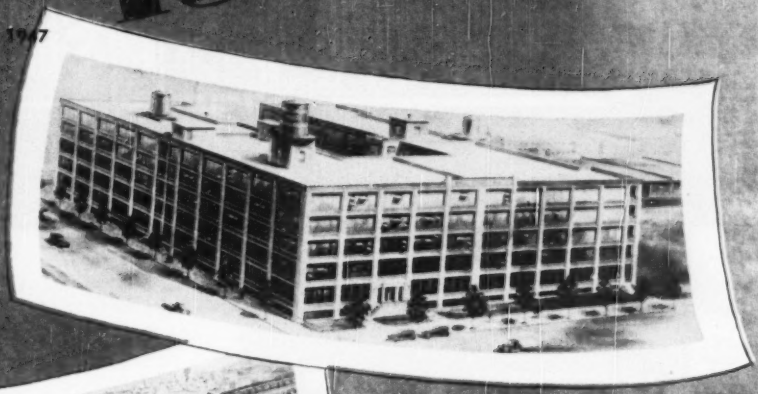
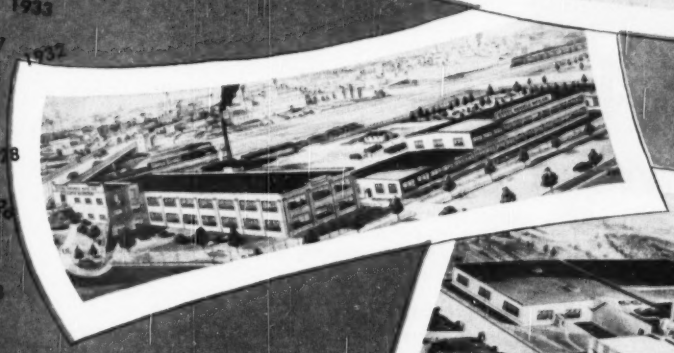
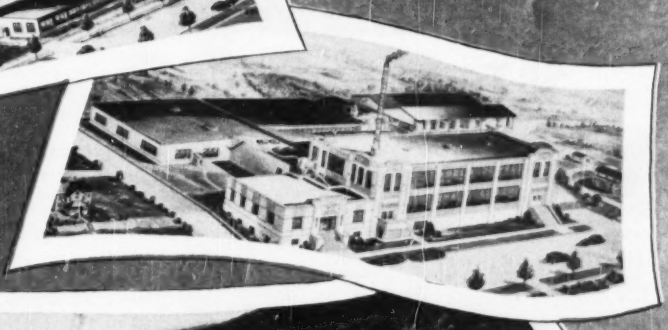
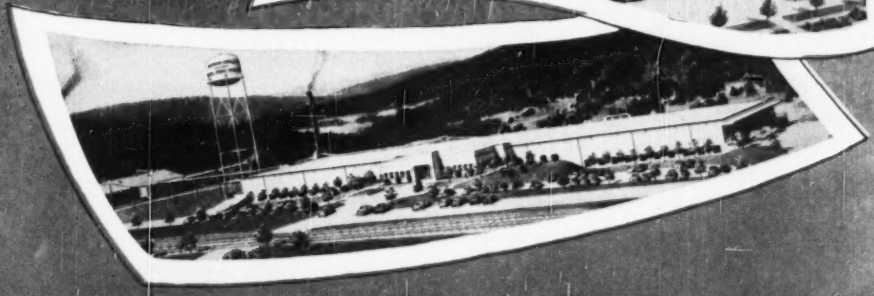
1898

1950









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TURBO

AD-48

Does the Work of Two Machines

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The Turbo AD-48 operation is fast, quiet . . . automatic, gentle as a lamb with your finest nylons. Production rating is 120 to 130 dozen pairs per 8-hour day. You can run two sizes at one time — there are two groups of 24 forms each. No loss of production time. The operator strips or dresses one group of forms while the other is in the chamber. Forms remain upright. Fabric will not creep. Solid leg forms are quickly removable for changing sizes and shapes.

The Turbo AD-48 keeps temperatures steady during finish boarding to give you static-free stockings perfectly finished. Provides an accurate timing device which automatically governs the precise preboarding operation.

Find out how much more you get with the Turbo AD-48—increased production of "firsts"—savings in labor—efficient operation. Get the complete story on the Turbo AD-48 today.

Write for this folder

TURBO MACHINE COMPANY
LANSDALE, PENNSYLVANIA
Southern Representative: F. W. Warrington Co., Charlotte, N. C.

never a slip 'twixt the cuff and the hip

when your out and in-seams are made on the

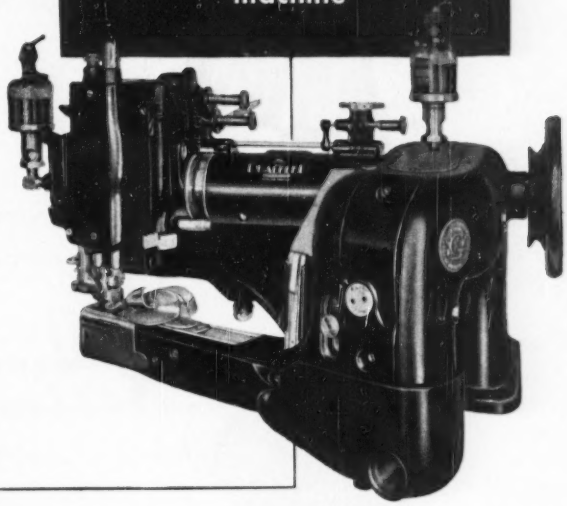
W & G

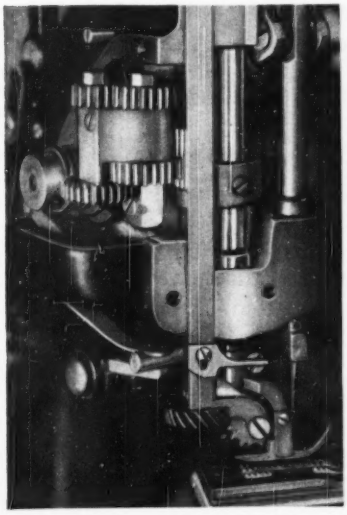
"DUALFEED"

machine

The W&G Feldlock "Dualfeed" is the ONLY machine of its type that will positively feed *both plies* of material *evenly* for the *entire length of the seam* — without assistance on the part of the operator. By permitting perfect synchronization of upper and lower feeds, the unique "Dualfeed" mechanism assures smooth, straight seams — absolutely free from wrinkles and distortion. This eliminates one of the most frequent causes for rejection of finished garments, particularly on the out and in-seams of overalls and work pants, where the legs must hang perfectly straight.

The W&G "Dualfeed" machine offers you many other time-saving, effort-saving features, too—features that mean faster and better production at lowest over-all cost. For the complete story, ask for your free copy of Bulletin 802.





The "Dualfeed" mechanism is simple in operation — compact and rugged in construction. It positively prevents variations in movement of the feed roll due to slippage of any kind.

WILLCOX & GIBBS
Sewing Machine Co.

214 West 39th St., New York 18, N.Y.

FABRIC begins with an—

and

DU PONT

REG. U.S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING
...THROUGH CHEMISTRY

FOR NYLON...FOR RAYON

ACETATE DIVISION • NYLON DIVISION • RAYON DIVISION—

the "F" turns out to be FIBER!

Funny thing about a fabric . . .
Somebody has to think it up,
Somebody has to say it's good,
Somebody has to produce it,

Somebody has to find a fiber.

For quality fibers . . .
fibers that have found their way into exciting, talked-about fabrics,
fibers that have kept those fabrics sound . . .

Du Pont **nylon**
Du Pont **acetate rayon**
Du Pont **viscose rayon** are the beginnings
of the fabrics and fashions of tomorrow.

And Du Pont is looking ahead to fibers
that will make tomorrow's fashions
even more exciting, wearable, long-livable!

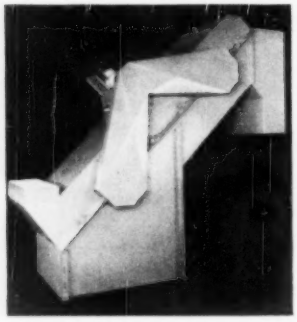
. . . FOR FIBERS TO COME . . . LOOK TO DU PONT!

Rayon Department, E. I. du Pont de Nemours & Co. (Inc.), Wilmington 98, Delaware

Merry Christmas to our friends and customers in the *Textile Industry.*

Thank You for the many orders in 1950 for the **Superior Cleaner,** and for your co-operation in the delivery and installation of these machines.

A happier 1951 is in store for those mills who have installed this cleaner for they will get cleaner cotton---(less motes, sand, leaf, metals, glass, rocks, seed, etc.)---for 1951 and years to come. And cleaner cotton means better carding, roving, drawing, better yarn and cloth.



Our Guarantee--

This machine must accomplish all we claim for it and prove entirely pleasing, or you can return it for full credit. Write today for complete data on this answer to your opening, cleaning and blending problems.

The Centrif-Air Machine Co., *Inc.*

ENGINEERS ***(Licensees)*** **MANUFACTURERS**

ATLANTA, GEORGIA

look at me
under ultra-violet

NATIONAL ANILINE DIVISION
ALLIED CHEMICAL & DYE CORPORATION
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Boston Providence Philadelphia Chicago San Francisco
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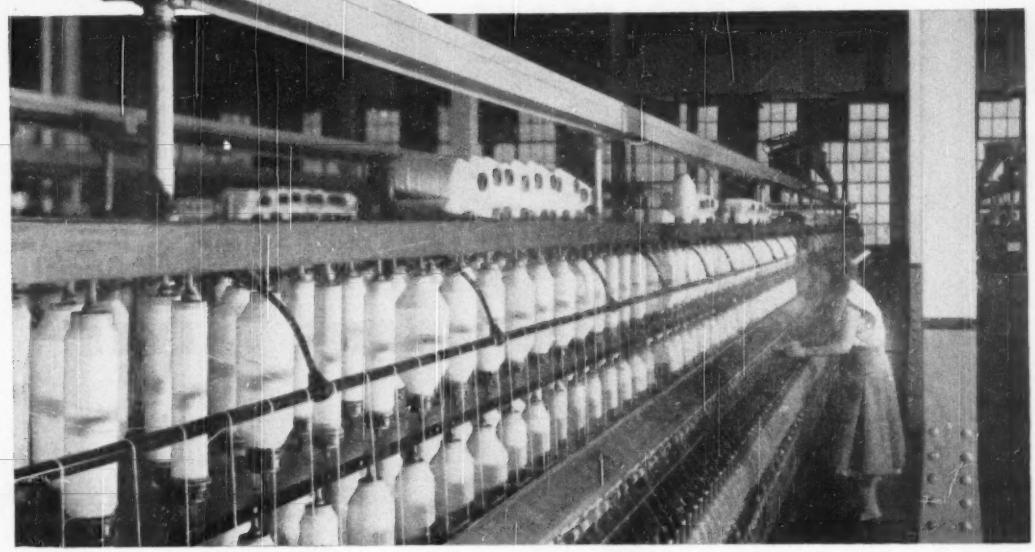
Columbus, Ga. New Orleans Chattanooga Toronto

DAYGLO® pat'd (1652)

Hidden power costs in your spinning room from increased oil viscosity?



GULFSPIN maintains its original viscosity even after extended service

—keeps power consumption low

Yes, oil viscosity has an important influence on power consumption of spinning frames! The higher the viscosity the more power consumed because of increased frictional drag.

Dirt, lint, water, and oxygen act to thicken spindle oils so that after several month's service an 80 Second oil may have a viscosity of 90-100 SUV at 100°F. As a result power costs in the spinning room can be appreciably higher than normal. And this increased cost is generally hidden because few mills run periodic power checks on spinning frames.

That's one important reason why it pays to use Gulfspin. This outstanding new oil does not undergo any appreciable increase in viscosity even after extended service. Thus it is possible to make substantial savings in power costs.

Gulfspin has many other characteristics which make it effective for spindle lubrication; it is not only resistant to the formation of sludge, but also prevents sludge from depositing on spindle shafts and bolsters—thus keeps spindles clean; it reduces wear because of excellent oiliness characteristics; and helps effectively to protect spindle parts against rust.

See for yourself on your frames that this new spindle oil is better in every way. Write, wire, or phone your nearest Gulf office and ask a Gulf Lubrication Engineer to call.

Gulf Oil Corporation · Gulf Refining Company

GULF BUILDING, PITTSBURGH, PA.

Sales Offices - Warehouses

Located in principal cities and towns throughout Gulf's marketing territory

GULF INDUSTRIAL LUBRICATION

doing this *costs more* now!

You do it less often

by using Dependable Quality

CRANE VALVES

That's why more Crane Valves are used than any other make

. . . this valve likes tough throttling jobs

—And for durable, maintenance-free service, it's typical Crane quality. The plug-type disc and seat construction in Crane No. 14½P's utilizes the toughest combination of metals found in 150-Pound brass valves. Extra wide seating surfaces give high resistance to damage by "wire drawing" or foreign matter. Crane disc taper is precisely correct for accurate flow regulation.

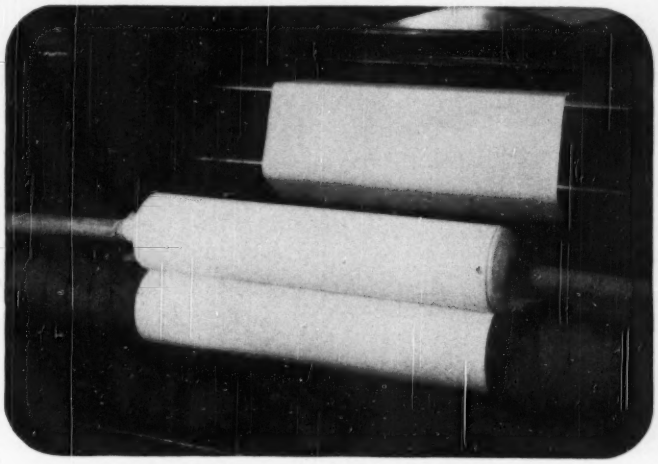
Whether you need throttling valves or any other type, you'll pay less in the long run by insisting on Crane Quality. Get a demonstration by your Crane Representative.

CRANE

CRANE CO., *General Offices:*
836 S. Michigan Ave., Chicago 5, Ill.
Branches and Wholesalers Serving All Industrial Areas

VALVES • FITTINGS • PIPE • PLUMBING • HEATING

COATED PRODUCTS COMMENTS



No Costly "Slips" Here!

Metal-coated granular projections of TEXALOX metalized cloth by CARBORUNDUM draw textile fabrics *firm* and *true*. "Slip" of drawing or take-up rollers is minimized—cut or chafed fibres are avoided—delivery of a definite length of material can be assured.

By even overall take-up, TEXALOX cloth covers also lower production costs *after* weaving. With uniform division of fibres, material dyes out to proper coloring throughout.

TEXALOX cloth is impervious to the action of moisture, dyes, oils, etc. Cleaner fabrics result. It can be obtained in fine-to-coarse grades, depending on material being processed. The Carborundum Company, Coated Products Division, Niagara Falls, New York.

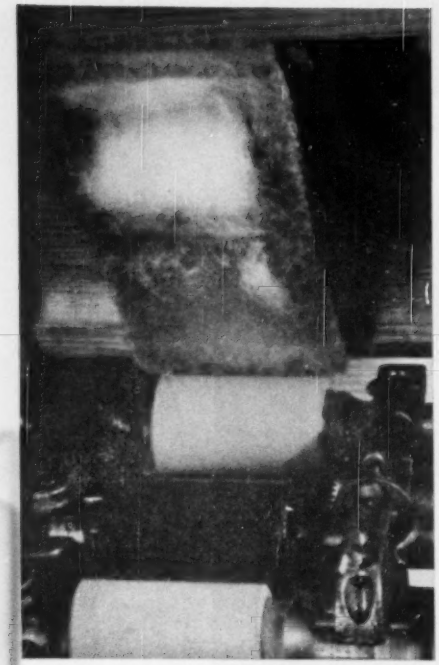
COATED ABRASIVES BY

CARBORUNDUM

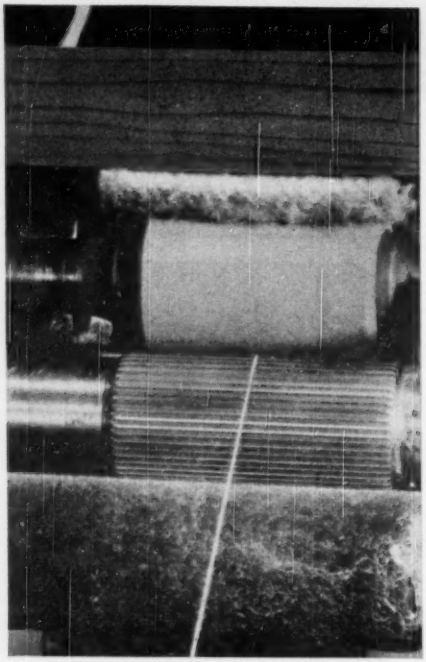
TRADE MARK

Making ALL abrasive products...
to give you the proper ONE

"Carborundum" and "Texalox" are registered trademarks which indicate manufacture by The Carborundum Company

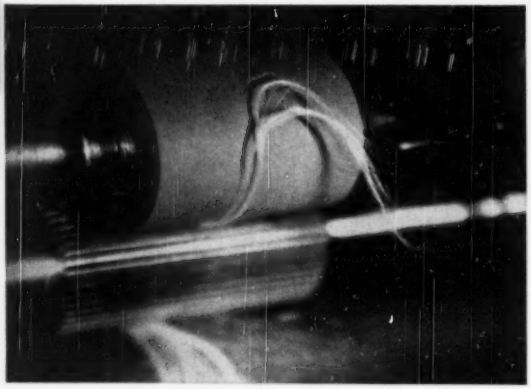


LESS EYEBROWING: The cork-dotted surface of NC-727 Accotex Cots has the friction needed to pack waste well back on the clearer where it can't be nipped into the yarn.

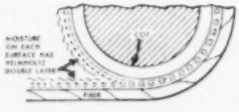


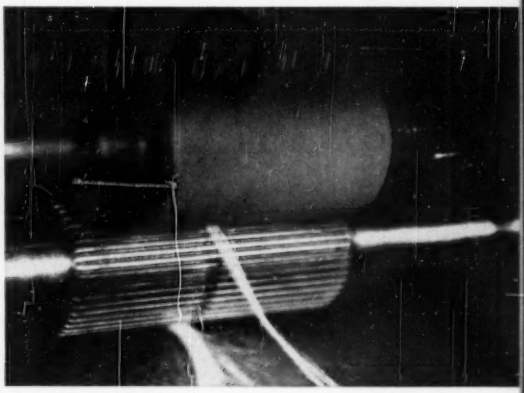
LESS SLICKING: Thousands of cork particles dispersed in NC-727 Accotex Cots make these covers resist slicking. Less frequent buffing is required and that means longer cot life.

GOOD FIBER CONTROL . . .

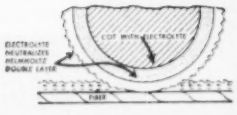


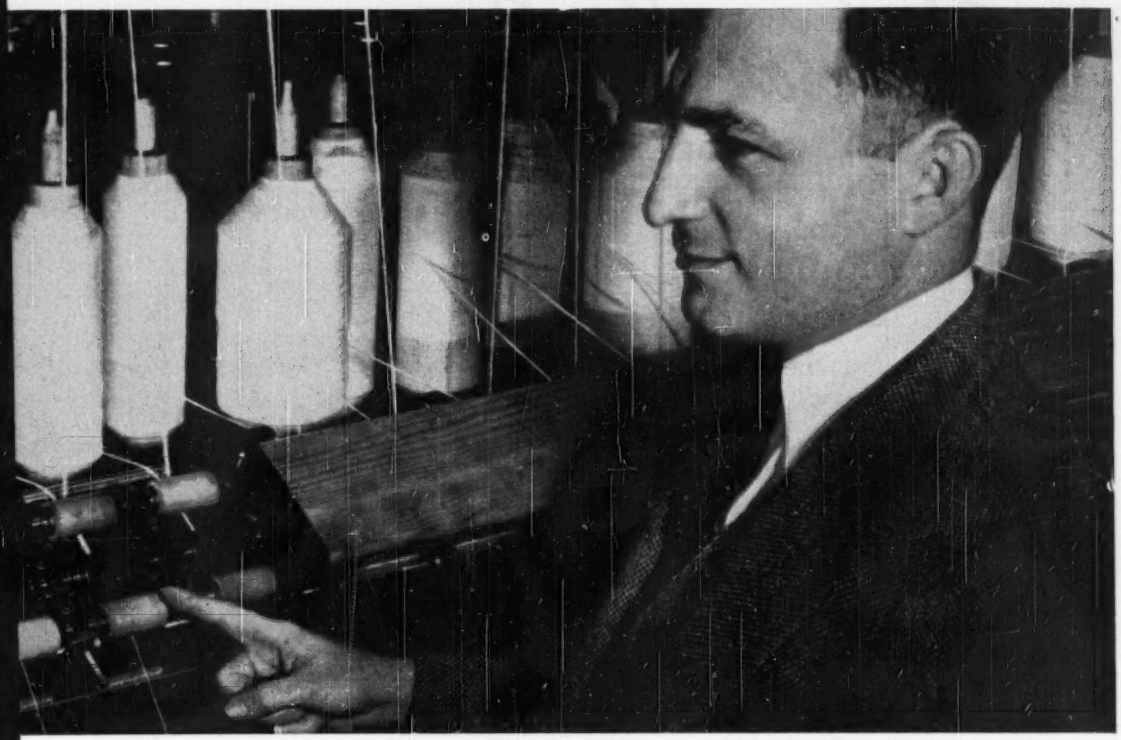
THIS COT LAPS. Moisture layers on fiber and cot contain electric charges that attract fiber to cot. When pressed together, the two moisture layers have the effect of adhering fibers to cot and causing them to lap up.





THIS COT DOESN'T LAP. Electrolyte incorporated in patented Accotex rubber composition neutralizes electric charge in moisture layer on cot. This eliminates attraction of fiber to cot and prevents lapping up.





MINIMUM MAINTENANCE

For best results, match roll coverings to your needs

Most mill men want two basic things in a roll covering: good fiber control and a minimum of roll covering maintenance.

The heart of good fiber control is good surface friction. Above all, a cot must draft well. It must also resist slicking, so that it will draft uniformly without frequent buffing. Finally, a cot should be both lap resistant and eyebrow resistant.

Minimum maintenance calls for a different set of characteristics. To insure the widest possible interval between re-coverings, use a synthetic rubber cot. A properly compounded synthetic cot is tough. At the same time, it should have lasting surface characteristics that make it unnecessary for you to grind its life away on a buffing machine.

Armstrong's Accotex® Cots are compounded to meet these mill demands. There's the popular NC-727 Accotex Cot, for example, a combination of synthetic rubber and cork that's so versatile it comes close to being an all-purpose roll covering. Its cork content accounts for its excellent eyebrow resistance.

Another Accotex Cot is the J-490, a straight synthetic cover. It's often used when synthetic fibers or blends are run on cotton system equipment. Like the NC-727, it is compounded with electrolytes. It's the most lap-resistant cot available.

Your Armstrong representative will gladly suggest the Accotex covering best suited to your work and arrange a test installation. Call him today. Armstrong Cork Company, Textile Products Department, 3612 Arch Street, Lancaster, Pennsylvania. Available for export.

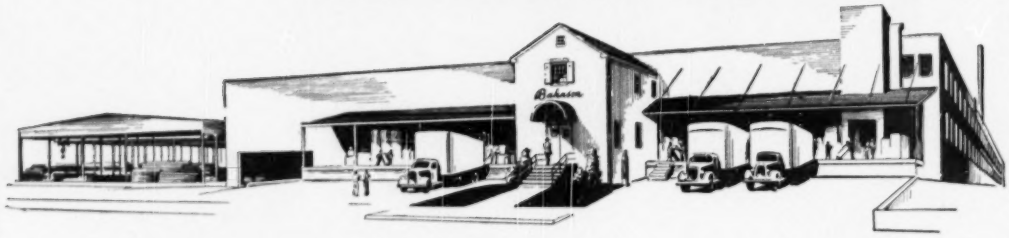
ARMSTRONG'S ACCOTEX COTS

one of Armstrong's complete line of textile mill supplies

ACCOTEX APRONS **CORK COTS** **ROLL SHOP EQUIPMENT**

Bahnson Air Conditioning

FOUNDED ON
FACILITIES for PROGRESS



Modern—complete—and planned for advancement of air conditioning methods is the best way to describe the Bahnson plant.

The Bahnson Grille offers horizontal and vertical blade deflection and features a removable core to facilitate grille cleaning as well as to provide an access door to the distribution duct.

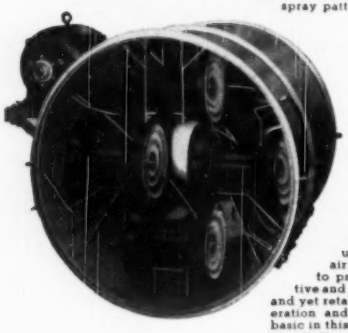
The Bahnson Flexidur brass spray nozzle has a discharge orifice stamped from stainless steel to eliminate erosion at the opening, prevent accumulation of foreign matter, and assure uniformity of spray pattern.

FACILITIES FOR RESEARCH

Full time research engineering is continually working with laboratory and testing equipment toward more efficient and economical methods.

FACILITIES FOR DEVELOPMENT

The proving ground of all Bahnson equipment is a department of research and development where full size models are "mocked-up" for trial and testing.



The Bahnson Centrispray Evaporator is available for either unit or central station air conditioning systems to provide high evaporative and air handling capacity and yet retain the economy of operation and installation that is basic in this Bahnson principal of atomization of water by centrifugal force.

FACILITIES FOR TECHNICAL PROGRESS

Long experience in air conditioning engineering coupled with our experience in the markets for air conditioning equipment inspires the continuous progress at Bahnson for matching all requirements with the latest and best equipment.

Bahnson Company
ENGINEERS AND MANUFACTURERS
WINSTON-SALEM, N. C.

May "Peace on Earth, Good Will Toward Men" soon reign throughout the world again.

DuraBeau

TEXTILE FINISHES

SCHOLLER BROS., INC. - Manufacturers of Soaps, Softeners, Sulphonated Oils and Finishes - Collins & Westmoreland Sts., Phila. 34, Pa. - St. Catharines, Ont., Can.

THIRD MAN THEME

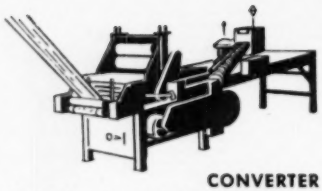
IN selling goods there are often three parties involved —the man who got the order, the man who got consideration, and the man who wasn't even called in.

Usually the "Third Man" is the representative of a mill that neglected to replace obsolete equipment with today's high productive machines . . . a mill that can't stand up against alert competition.

When textile orders are involved, No. 1 and No. 2 get the business and you will find that they represent the mills with the most up-to-the-minute equipment.

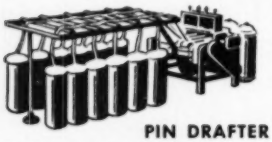
Don't be caught whistling the "Third Man Theme".

Put your mill on a profit-making basis by getting an analysis of what can be done for you to increase efficiency . . . reduce production costs. Call in our Field Engineer in your territory for complete information.



CONVERTER

Changes synthetic tow into cut staple ready for the drawing operations. Also blends staple with wool or another synthetic, in accurate proportions.



PIN DRAFTER

Eliminates costly steps after the comb in preparing sliver for spin. Fits into all worsted systems.

BRANCH OFFICES

Rivulet Mill, Uxbridge, Mass.
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WARNER & SWASEY
Cleveland
TEXTILE MACHINERY DIVISION

YOU CAN PRODUCE IT BETTER, FASTER, FOR LESS . . . WITH A WARNER & SWASEY

CH_3COOH

ACETIC ACID FROM TENNESSEE

We make it our business to know the needs of processors and manufacturers. By knowing your needs we can serve you better. We fit an integrated production, under rigid quality controls, to a "timed" delivery that offers you total dependability . . . supply-wise and quality-wise.

Let us become familiar with *your* specific needs. Then we'll demonstrate for you why particular buyers agree—it's wise to buy chemicals from Tennessee.

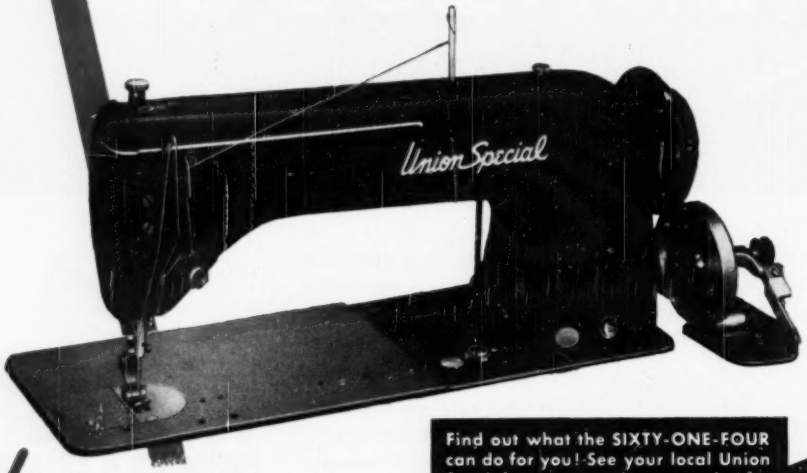
Tennessee can supply your complete requirements. For quotations and product information, write or call

TENNESSEE PRODUCTS & CHEMICAL *Corporation*
NASHVILLE, TENNESSEE

UNION SPECIAL'S NEW LOCKSTITCH!

HERE is Union Special's new LOCKSTITCH machine, Class 61400, for single needle, plain seaming operations. Thoroughly tested and proved in the field and now in regular production, it embodies numerous outstanding improvements over previous machines:

- **SMOOTH, FLAT SEAMS—EVEN ON CURVES!** New feed mechanism is specially designed to produce a smooth, symmetrical feed curve. Insures even feeding of materials — smooth, perfectly flat seams.
- **NO FEED MARKS! NO CUTTING!** Handles the lightest nylon, cotton, or rayon without feed marks or cutting.
- **PERFECT, UNIFORM STITCHING!** Stiffer needle construction results in highly uniform line of stitching. Improved hook timing provides better stitch control.
- **SUPERIOR FOR TACKING, BACK STITCHING, STAYING!** Everything you want in performance as a result of refined, scientific thread control. Less sensitive to foot lift variations when tacking.
- **FAST, LIGHT RUNNING!** New, higher speed. Light weight parts make for smooth, effortless operation—fast starting and stopping—positive, yet gentle, feeding action.
- **TIME-SAVING ADJUSTMENTS!** Push button control for quick, easy adjustment of stitch length. New thread control tension allows full adjustment from outside the machine.



Find out what the SIXTY-ONE-FOUR can do for you! See your local Union Special representative, or write for information.

PRECISION BUILT by

Union Special MACHINE COMPANY

World's Largest Exclusive Builder of Industrial Sewing Machines

407 NORTH FRANKLIN STREET • CHICAGO 10, ILLINOIS

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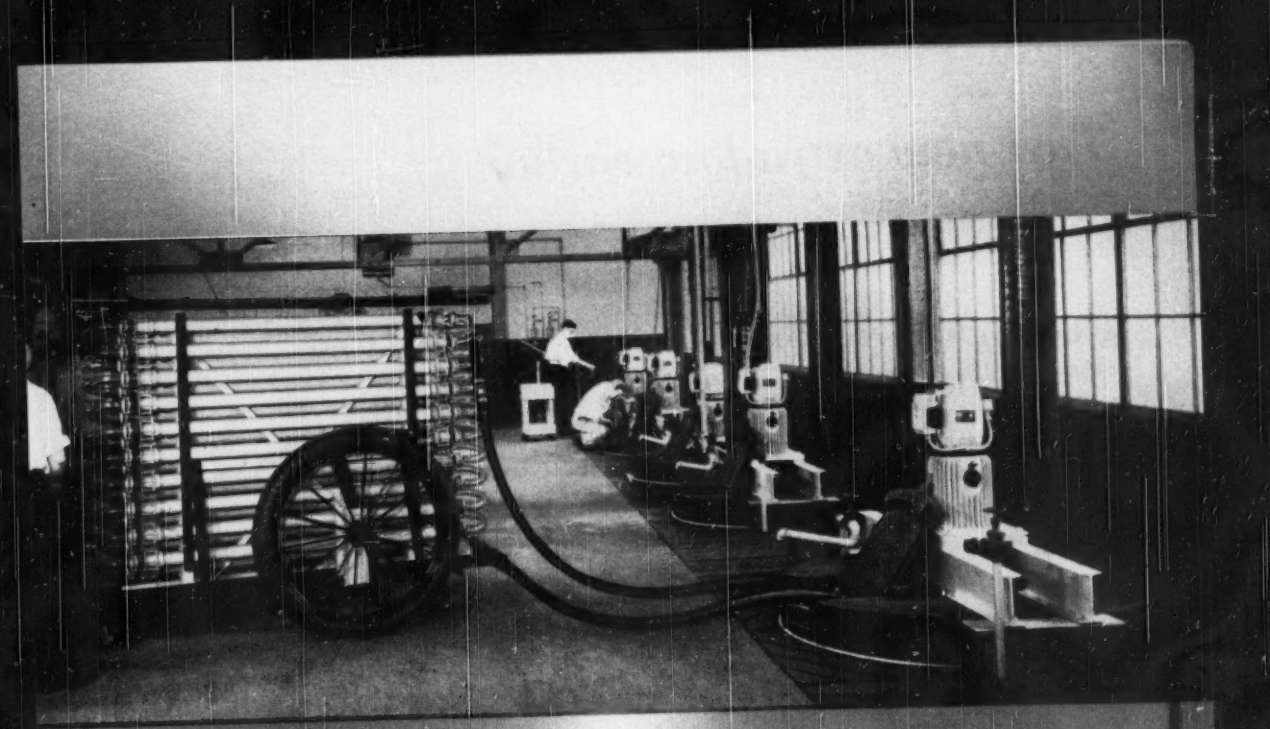


PYREX heat exchanger

—no contamination—

to give you

a Superior Product

Many metals contaminate the finest dyestuffs, causing flat, dull shades and even spots on the finished fabric. To eliminate this "risk," we've gone so far as to build special apparatus of PYREX GLASS . . . the unique, ultra modern Heat Exchanger through which is pumped the fluids to be heated or cooled. Thanks to our more advanced methods of dye-making, Althouse dyes never come in contact with corrosive metals while in the wet stage. Althouse superior dyestuffs enable YOU to produce a superior product!

ALTHOUSE

Chemical Company, Inc.

READING, PENNSYLVANIA

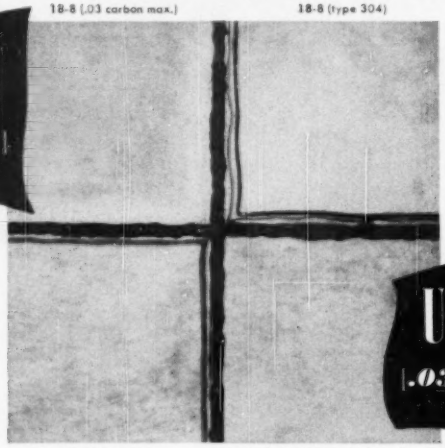
pace-setter in precision dye-making

Two new extra-low carbon

U·S·S Stainless Steels

give high corrosion resistance after welding

U·S·S 18-8
[.03 carbon max.]



U·S·S 18-8Mo
[.03 carbon max.]

This panel, composed of specimens of the four grades indicated, illustrates dramatically how low carbon grades resist corrosion after welding. The panel was exposed for 6 hours to a 10% HNO_3, 3% HF solution at 80°C. Neither of the low carbon specimens shows evidence of deterioration, while the standard 18-8 (type 304) grade is completely severed at the critical weld zone and the standard 18-8Mo (type 316) specimen is severely attacked at this point.

If you need a grade of Stainless Steel that must undergo exposure to exceptionally severe corrosive conditions after welding or hot forming, you'll find real savings in these two new grades of U·S·S Stainless Steel which contain a maximum of 0.03% carbon.

During exposure to sensitizing temperatures—800° to 1600°F.—some of the chromium in ordinary grades of Stainless combines with carbon to form chromium carbides, thus reducing corrosion resistance. Heretofore, fabricators have had to combat this by annealing the product or by the use of steel containing such stabilizing elements as columbium or titanium—both expensive operations.

Development of two new U·S·S Stainless Steels—U·S·S 18-8 [.03 carbon max.] and U·S·S 18-8 Mo [.03 carbon max.]—now makes the inconvenience of special treatment or the extra cost of stabilized grades in many applications unnecessary. In these new grades, the carbon content has been drastically reduced, practically eliminating the problem of carbide precipitation with resultant intergranular corrosion.

Corrosion tests of welded joints have indicated that these new grades give resistance to intergranular corrosion adjacent to welds equal to the more expensive stabilized grades and far in excess of ordinary grades.

By replacing stabilized grades with low carbon grades, you can realize savings in material costs up to 10%. In many cases, stress-relieving of welded vessels can be accomplished at substantially lower temperatures.

Get all the facts on these two new U·S·S Stainless Steels by writing for a copy of our booklet. Send your request to United States Steel Corporation Subsidiaries, 2201 Carnegie Building, Pittsburgh 30, Pa.

Where to use these low-cost, low-carbon Stainless grades

Welded tubing
Smoke stacks and ductwork in chemical plants
Drawn shapes for welded assemblies
Hoods and ducts in paper and textile plants
Chemical extraction tanks
Sulfite digesters
Pickling tanks
Chemical polishing tanks
Bubble caps in distillation units

AMERICAN STEEL & WIRE COMPANY, CLEVELAND · CARNEGIE-ILLINOIS STEEL CORPORATION, PITTSBURGH
COLUMBIA STEEL COMPANY, SAN FRANCISCO · NATIONAL TUBE COMPANY, PITTSBURGH · TENNESSEE COAL, IRON & RAILROAD COMPANY, BIRMINGHAM
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USS

U·S·S STAINLESS STEEL

SHEETS · STRIP · PLATES · BARS · BILLETS · PIPE · TUBES · WIRE · SPECIAL SECTIONS

0-1845

UNITED STATES STEEL

CARBOLAN*

Dyestuffs

FOR LOOSE WOOL AND SLUBBING

Brilliant shades . . .
excellent light fastness . . . exceptional wet fastness.

Another of the many outstanding dyestuffs to be presented by Arnold, Hoffman through association with Imperial Chemical Industries, Limited.

AHCO PRODUCTS **ARNOLD, HOFFMAN**
PROVIDENCE, RHODE ISLAND

Associated with
Imperial Chemical Industries, Ltd.
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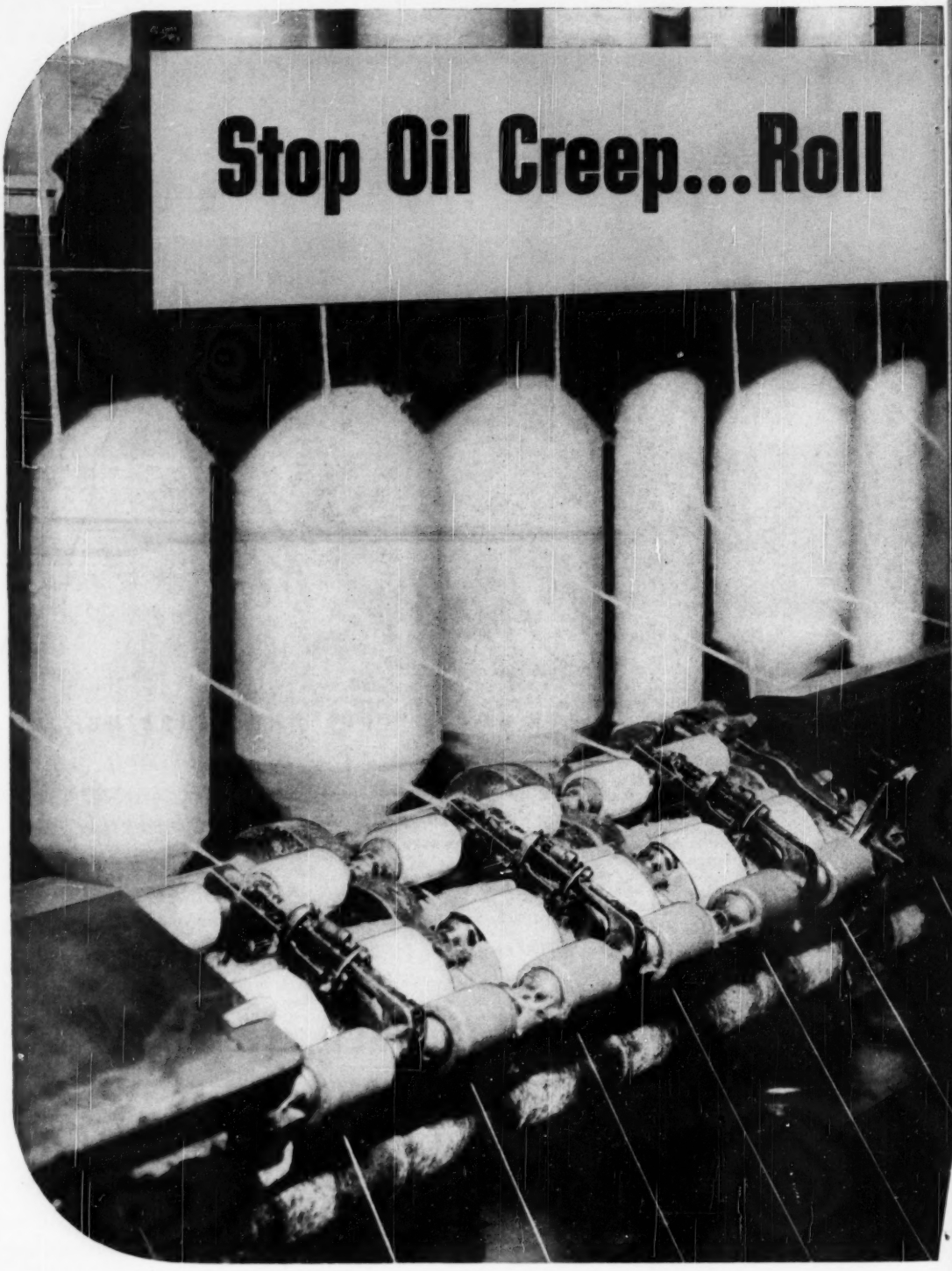
Offices at: Charlotte; Cincinnati; New York; Philadelphia; Providence

*Patented


Stop Oil Creep...Roll

Damage...Yarn Spoilage

...use SINCLAIR NO-DRIP

Here's a fine lubricant especially made to stay in place!

When you apply Sinclair NO-DRIP to necks and yokes, it stays right there, allows rolls to turn smoothly, without drag. This provides even draft and saves wear. And, because NO-DRIP will not creep or drip, yarn and roll coverings are protected from spoilage. So, for uniformly finer yarn production, fewer roll replacements, and for lower maintenance cost, use NO-DRIP.

SINCLAIR TEXTILE LUBRICANTS

For full information or lubrication counsel write Sinclair Refining Company, 630 Fifth Avenue, New York City

YOU CAN BE **SURE**.. IF IT'S

Westinghouse

The time to fight fire is *before* it starts. A fire caused by lint and dust reaching the contacts of an ordinary loom motor starter *could* destroy your entire mill. The answer to eliminate this hazard is the new Westinghouse Gasketed, Lint-Tight Loom Motor Starter. Designed in collaboration with the engineering division of the Associated Factory Mutual Fire Insurance Companies and leading textile manufacturers, it is aimed specifically at reducing weave room fire hazards.

Lint and dust is kept out! A special Neoprene gasket forms a positive, continuous seal between the box and cover. Pressure from the cover clamp makes sure every crevice is filled with the pliable Neoprene gasket . . . positive assurance that combustible elements cannot enter the enclosure. Thus, one major cause of weave room fires is stamped out before it can start!

When you specify Westinghouse you get other valuable "extras", too—Positive Disc-Type, Bimetallic Overload Protection with no fuse replacements . . . "De-ion®" Arc Quenchers . . . an all-new, rotary handle mechanism with no possible way for lint to enter the enclosure—that cannot be kicked or bumped "on" or "off" inadvertently . . . and line terminals either at top or bottom upon specifications.

Ask your nearby Westinghouse representative to show you the new Gasketed, Lint-Tight Loom Motor Starter on your desk top! Ask him for a copy of B-5256 or write Westinghouse Electric Corporation, Box 868, Pittsburgh 30, Pennsylvania. J-30039

Westinghouse

LINT-TIGHT

LOOM MOTOR STARTERS

Sporting Colors ...BY INTERWOVEN

A riot of colors . . . is how you would describe this top notch line of men's hose.

Next to the label, it's the color pattern that helps most to make the sale. So, leading manufacturers — like Interwoven — make sure the dyestuffs they use have the quality to stand up under the various treatments and under repeated washings.

For many mills, the best guide to such quality is the name Sandoz.

For shrinkproof hosiery and other wool materials, the following colors have been found to be affected least by chlorination treatments and to stand repeated washing:

Xylene Brilliant Cyanine G & 6B
Xylene Milling Orange R
Acid Light Scarlet GL
Brilliant Alizarine Milling Blue G Pat.
Xylene Milling Blue 6G
Xylene Milling Yellow 3GL
Xylene Milling Yellow 6G

And for any chrome, acid or direct dyes . . . or auxiliary chemicals . . . and for both natural and synthetic fibres . . . be guided by the successful "color achievements" you see in these Sandoz advertisements.

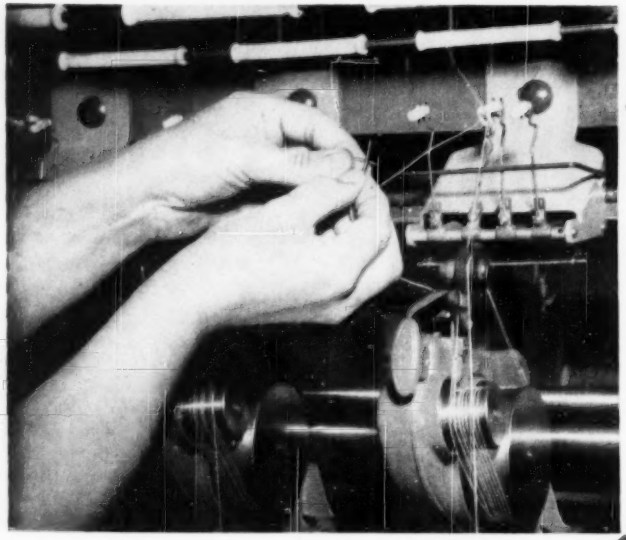
DIRECT-DYE COTTON AND RAYON WITH CUPROFIX FOR WASH FASTNESS

New CUPROFIX colors and after-treatment give fastness to washing, light, etc., that formerly required more expensive vat dyeing. Write for booklet on CUPROFIX, already adopted by dozens of mills.

SANDOZ CHEMICAL WORKS, INC., 61 VAN DAM STREET, NEW YORK 13, N. Y.

Application laboratories and stocks at Boston, Philadelphia, Charlotte, Chicago, Los Angeles, Toronto • Other branches at Providence, Paterson and Montreal

SANDOZ *thinks ahead with textiles*

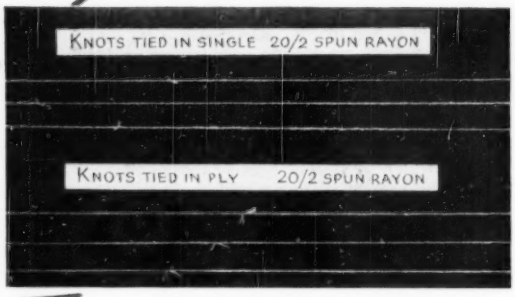


Tying knots HERE

Individual automatic stopping mechanism for each end in the ply improves quality of yarn on Atwood Model 10 Ring Twisters—cotton, worsted, spun rayon, nylon, blends, etc.

Each end passes through a drop wire. When a break or run-out occurs, the wire instantly actuates a mechanism to stop the feed rolls and the spindle . . . so that the knot can be tied in the single end.

This means knots are smaller, therefore less troublesome. Also, *drop ply* can't get into the package . . . and roller laps are prevented, reducing waste.



makes THIS difference in quality

When a break is tied in the single end prior to twisting and the tails are properly clipped, the knot tends to be hidden in the twisted plied yarn. The smaller knot improves appearance, reduces grease and oil pick-up, and makes it easier to pass the yarn through the reed of the loom or the knitting needle.

Knots can be tied in the singles and drop ply can be prevented *only* on machines having an individual stop motion for each end.

UNIVERSAL WINDING COMPANY

ATWOOD DIVISION

P.O. Box 1605, Providence 1, R. I.

Boston, Philadelphia, Utica, Charlotte, Atlanta, Chicago, Los Angeles; Montreal, Hamilton, Canada; Manchester, England; Paris, France; Basle, Switzerland.

Agents in every principal textile center throughout the world

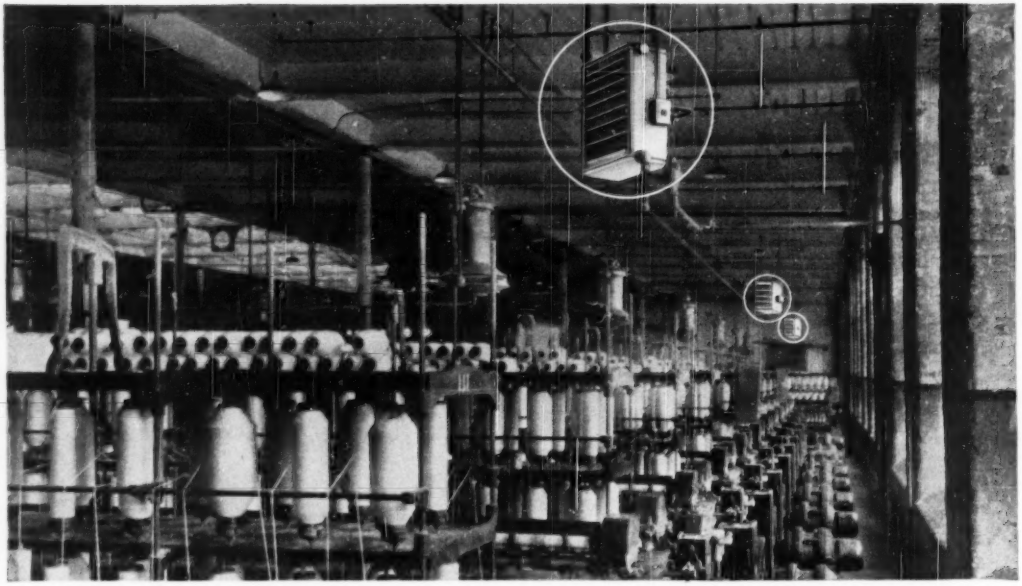
Winding and Twisting Machinery for Natural and Synthetic Yarns

Model 10 *automatic stop motion for each end and ply*

HORIZONS UNLIMITED!
Today, Powell Valves meet every requirement of American Industry for long-life, dependable flow control equipment. And, as new demands arise, Powell will make the right valves to satisfy them.
Powell makes valves specifically adapted to YOUR industry. The Complete Powell Line includes Globe, Angle, Gate, Check, "Y", Non-return, Relief and Flush Bottom Tank Valves, in Bronze, Iron, Steel and the widest range of Corrosion-Resistant metals and alloys ever used in valves.
PATENTED
POWELL
1500
STEEL
POWELL
The WM. POWELL CO., 2525 Spring Grove Ave., P. O. Box 106, Station B, Cincinnati 22, Ohio

SOLVE YOUR HEATING PROBLEM NOW

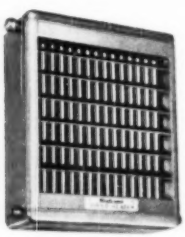
. . . EFFICIENTLY, ECONOMICALLY



Mill installation showing positioning of Speedheaters for maximum heat distribution over large area.

Sturtevant Textile Mill Speedheaters® are specially designed to meet your particular heating needs. High speed textile equipment throws off lint and dust which in time would clog ordinary unit heaters. The absence of fins, plus the round condensing tube construction of Speedheaters, makes it difficult for lint and dirt to gather and clog the heating element. Matter which does collect dries quickly, and is carried away in the air stream.

Contact your plumbing and heating contractor for information, or write Westinghouse Electric Corp., Sturtevant Division, Hyde Park, Boston 36, Massachusetts.



OVER AND ABOVE THE SPECIAL DESIGN OF TEXTILE SPEEDHEATERS YOU GET THESE PLUS FEATURES IN EVERY UNIT:

1. **Constant Maximum Heating Capacity . . .** freedom from lint permits maximum air flow.
2. **Easy Installation . . .** flat top construction permits installation directly to ceiling. Soft steel hangers can be shaped on job.
3. **Low Cost Operation . . .** leak-free design and curved propeller blades keep operating costs low.
4. **Fast Heat Delivery . . .** Speedheaters go to work when turned on; no "warm-up" time and fuel lost.
5. **Efficient Distribution . . .** adjustable louvers direct heat down into working areas where it is needed.

YOU CAN BE SURE . . . IF IT'S

Westinghouse

A-80199

here's why Reeves and Reeves alone gives you a choice of 3*

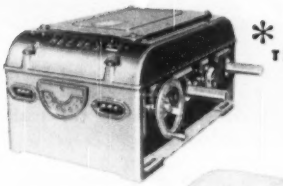
REEVES—with the widest textile field application experience of *any* manufacturer in the specialized field of speed control engineering—knows as well as you do that no *one* type of unit can be the most efficient solution to *every* speed control problem encountered by textile machine operators and builders.

That's why REEVES builds a *complete* line . . . *three* separate and distinct types of units . . . all incorporating the same time-tested REEVES operating principle, but each possessing *different* features of design and construction to meet the individual requirements of the individual machinery builder and user.

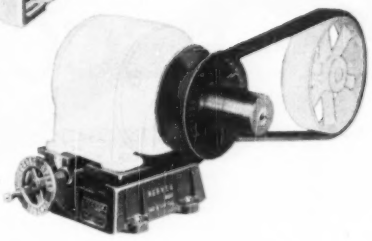
All three REEVES units are available in the widest range of designs, sizes, speed ratios and controls, assuring the *right* unit for every machine . . . the *right* speed for every operation and every operator, under every changing condition.

A REEVES field engineer, thoroughly familiar with textile mill operations, will be glad to meet with you and discuss your particular speed control problem—without obligation. You can be sure his recommendations will be completely unbiased and impartial as to the unit best suited to your needs because his is the *complete* line! Write for his name and for your *free* copy of the 132-page REEVES catalog, No. T56-3N.

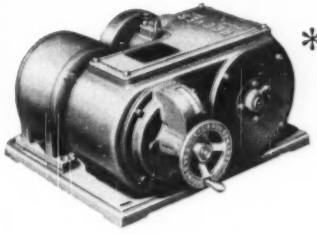
REEVES PULLEY COMPANY • Columbus, Indiana



* **TRANSMISSION**



* **MOTOR PULLEY**



* **MOTODRIVE**

***Transmission**, extremely rugged in construction, is especially desirable for installations where the demand is for heavy-duty service, higher horsepower output, wide speed range, automatic control, etc. Provides infinite, accurate speed flexibility over a range of 2:1 to 16:1. Sizes—fractional to 87 hp.

***Motor Pulley**, most practical in installations requiring economy, limited speed range, ease of installation, low horsepower output, etc. Provides an instantly variable speed drive within 4:1 ratio for any constant speed motor. Sizes to 10 hp.

***Motodrive**, ideal for installations indicating compactness, low output speeds, etc. Combines motor, speed varying mechanism and reduction gears in single unit. Speed variations 2:1 to 6:1 inclusive. Sizes to 20 hp. (Also available in fractional horsepower sizes, with speed variations of 10:1.)

Recognized Leader in the Specialized Field of Speed Control Engineering

accurate · variable **REEVES** *Speed Control*

LET'S LOOK AT THE RECORD

FOR 1950

These are some of the more outstanding research-born developments in 1950 of Interchemical's Textile Colors Division —all dedicated to the solution of *your* color problems.

Aridye PIGMENT COLORS

Interchem Dyes

Interchemical Corporation

ARIDYE Pigment Padding Colors

These new resin-bonded pigment colors are applied by a simple padding process to cotton, rayon, nylon, and other fabrics. They are particularly suitable for producing light to medium shades with good all-round fastness to light, washing, dry-cleaning, and perspiration. They may be used in conjunction with Interchem® Milmer* Dispersion for dyeing and mildew-proofing in one operation.

*Reg. Trade Mark—Monsanto Chemical Company

ARIDYE Pigment Colors for Application Printing—ARIDYE Violet FC2B • ARIDYE Yellow L2G • ARIDYE Scarlet F5Y

These three colors were developed to meet the specific demands of printers for a bluish violet; a yellow with improved light-fastness; and a stronger, more brilliant scarlet.

ARIDYE Pigment Discharge Colors

This series of resin-bonded pigment colors now makes it possible to produce brilliant, *fast*, "silk" shades on rayon crepes, viscose rayon, Bemberg rayon sheers, spun rayons, and other fabrics. Aridye® Pigment Discharge Colors give unequalled brilliance, clarity, all-round fastness to washing, dry cleaning, perspiration, and light, with no impairment of hand.

IT PAYS TO BRING *YOUR* COLOR PROBLEMS TO INTERCHEMICAL. WRITE US FOR DETAILS ON THESE NEW DEVELOPMENTS AND THE MANY OTHER PRODUCTS WE PRODUCE.

INTERCHEM Acetate Dyes

Interchem Direct Acetate Black NC • Interchem Direct Acetate Navy Blue NVY • Interchem Acetate Bright Navy B

These direct-dyeing acetate colors have excellent build-up and level dyeing properties, providing accurate control of final shades. They reduce dyeing time and rehandling . . . lessen the possibility of shaded selvages . . . cut costly redyes and seconds to a minimum. They dye equally well on boxes or jigs . . . are particularly suitable for dyeing acetate rayon and nylon dress goods.

ARIGEN Dyes

This series of stabilized azoic dyes produces brilliant reds, scarlets, yellows, violets, blues, and other shades of excellent all-round fastness in dark and medium depths for printing cotton, rayon and other fabrics. When used in conjunction with Aridye Colors, Arigen® dyes produce many popular color combinations.

QUALITY!

UNIFORMITY!

SERVICE!

Textile Colors Division

HAWTHORNE, N. J. ROCK HILL, S. C. PAWTUCKET, R. I.

Get greater uniformity in continuous bleaching

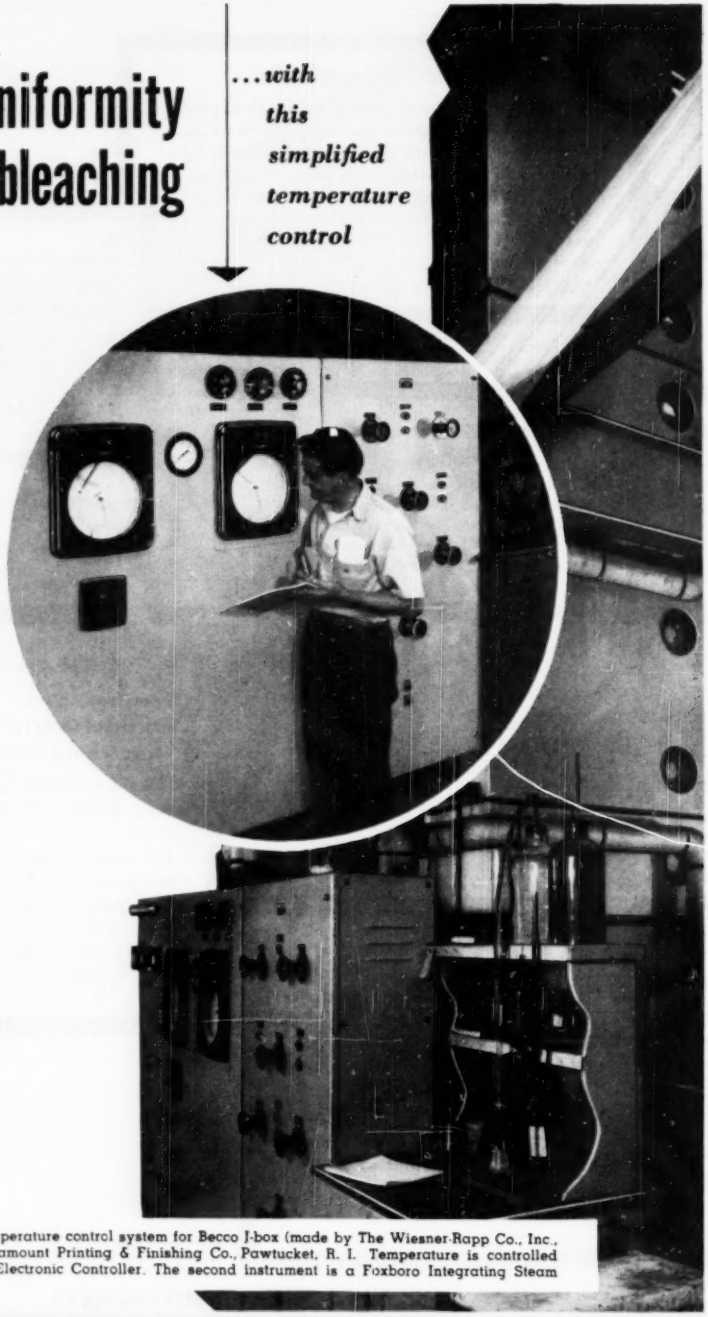
...with this simplified temperature control

Like the Paramount Printing & Finishing Company in Pawtucket, R. I., you can insure higher uniformity in continuous bleaching . . . as well as new freedom from risk of mechanical troubles . . . by installing Foxboro Dynalog Control for J-box temperatures.

In more than a year of continuous trouble-free service, the Dynalog Controller on this Becco J-box has maintained uniform steam treatment, regardless of fabric or speed.

Eight progressively spaced measurement locations are individually connected to the instrument through a simple rotary switch. This switch permits rapid scanning of zone temperatures, determines cloth level, and establishes control in the zone immediately below that level.

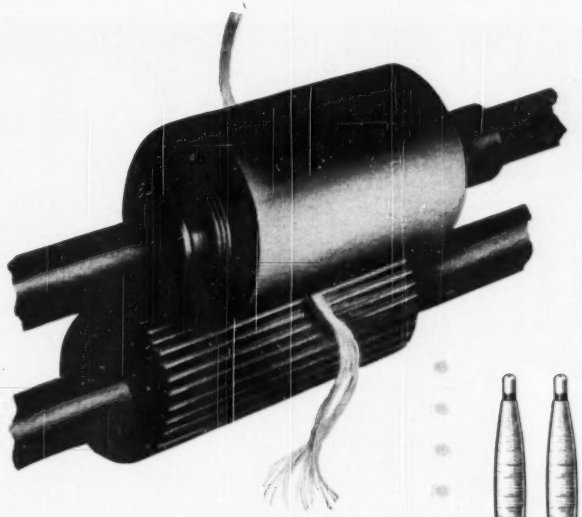
Investigate this more-dependable control of your J-boxes. Write for detailed information. The Foxboro Company, 18 Neponset Ave., Foxboro, Mass., U.S.A.



Complete Foxboro temperature control system for Becco J-box (made by The Wiesner-Rapp Co., Inc., Buffalo, N. Y.) at Paramount Printing & Finishing Co., Pawtucket, R. I. Temperature is controlled directly by Dynalog Electronic Controller. The second instrument is a Foxboro Integrating Steam Flow Recorder.

FOXBORO
REG. U. S. PAT. OFF.

RECORDING · CONTROLLING · INDICATING
INSTRUMENTS



fewer ends down with SYTON... more efficiency from stock to fabric

Already, hundreds of woolen and worsted mills are improving the "processability" of their fibers in practically every step from picking to weaving—with Syton, Monsanto's silica dispersion.

Here's how! Syton increases yarn strength 10%-30%... reducing ends down as much as 25%. And you know what fewer ends down means in your mill: real savings in both production and labor time; less raw material going to waste, more going towards profits.

Fewer ends down is typical of the *many* production advantages and savings you realize all along the line with Syton. Savings that become more and more important as raw-wool prices and operating costs rise.

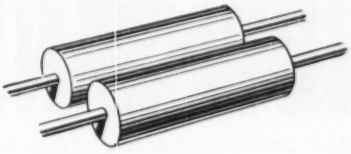
see your Monsanto Salesman

for specialized textile assistance right in your own plant. He's a qualified technician, familiar with mill operations and with the textile chemicals that can help you weave better fabrics... at lower cost.

TEXTILE CHEMICALS DEPARTMENT

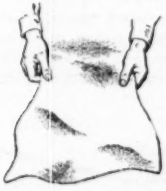
finer counts

Because Syton increases strength and improves uniformity during drafting, finer counts can be spun on all grades of stock... increasing fabric quality per pound of raw material.



carding

Better parallelization of the fibers. Fibers are more uniform and controlled so that cards may be speeded, often with reduced fly and waste.



weaving

Better yarn strength helps warp dressing and increases weaving efficiency.

*Reg. U.S. Pat. Off.

MONSANTO
CHEMICALS—PLASTICS

SERVING INDUSTRY... WHICH SERVES MANKIND

For full information on Syton and other Monsanto textile chemicals, check and return this coupon: ☐ *Syton; ☐ *Stymer, for acetate slashing; ☐ *Merlon resins for durable finishes; ☐ *Resiooms, for washability and wrinkle resistance; ☐ *Sted, for cleaning and scouring action; ☐ Catalyst AC for curing melamine and urea resin finishes; ☐ Dye intermediates; ☐ *Rezgard, fugitive-type flame retardant.

MONSANTO CHEMICAL COMPANY,
Textile Chemicals Department, Desk TIT29,
Everett Station, Boston 49, Mass.

Name & Title _____

Company _____

Address _____

City, Zone, State _____

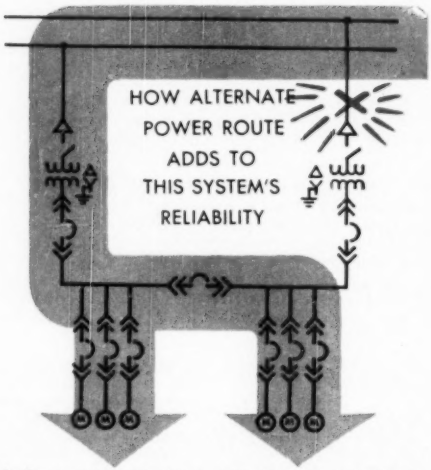
Before!
Latest thing when it was installed in 1925, this G-E open-type switchboard at Bigelow-Sanford is typical of the power distribution equipment now being replaced. Overloaded, it was causing flickering lamps, low voltage at the motors, and overheated knife switches.

BIGELOW-SANFORD BOOSTS

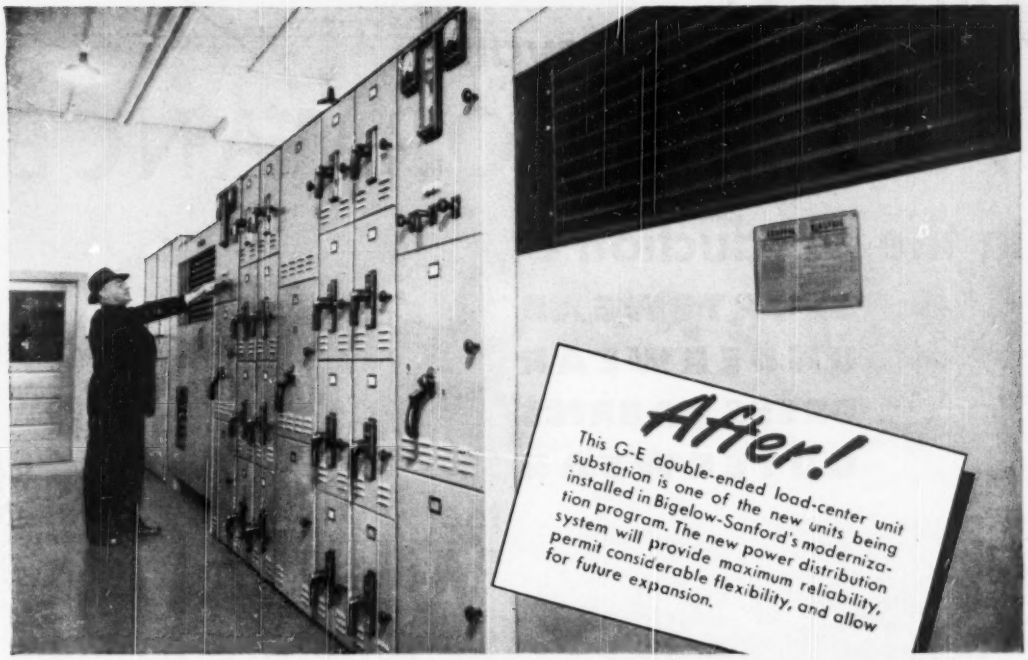
PLANNING TO MODERNIZE?

See how other textile mills are doing it in General Electric's new full-color and sound movie, "Textiles Unlimited." Over 40 ways to improve quality and cut costs are shown. Ask your G-E representative to arrange a showing for you of this More Power to America presentation.

POWER DISTRIBUTION SYSTEMS for Textile Mills



In the secondary selective power system used at Bigelow-Sanford, a power detour to secondary circuits is provided by closing the tie circuit breaker between the secondaries of two transformers. Thus, if a primary-circuit fault de-energizes one transformer, essential load is bypassed to the other, and important production keeps going.


After!
This G-E double-ended load-center unit substation is one of the new units being installed in Bigelow-Sanford's modernization program. The new power distribution system will provide maximum reliability, permit considerable flexibility, and allow for future expansion.

PRODUCTION CONTINUITY

Modern General Electric power-distribution system, replacing outworn equipment, assures reliable textile-mill power—helps keep machines on the job!

Recognizing that modern textile machinery is helpless without adequate electric power, the Bigelow-Sanford Co. has completely modernized the outgrown power-distribution system in its Amsterdam, N. Y. plant. The new equipment was purchased from General Electric, taking full advantage of this company's technical assistance and know-how.

For thorough reliability, the new system uses the modern load-center principle with a dual power-supply route. Power at 13.2 kv is carried right to the mill's centers of electrical load, where it is stepped down to 600 volts for utilization. Now light flicker and cable heating losses are reduced, proper voltage is maintained at the motors, and production delays are cut—because machines stay on the job more continuously!

Your power distribution system, too, can be modernized to pay off in more continuous production, when engineered to your specific needs by G-E textile-mill specialists. To help make your mill modernization program a success, call in your G-E representative early. *Apparatus Dept., General Electric Company, Schenectady 5, N. Y.*

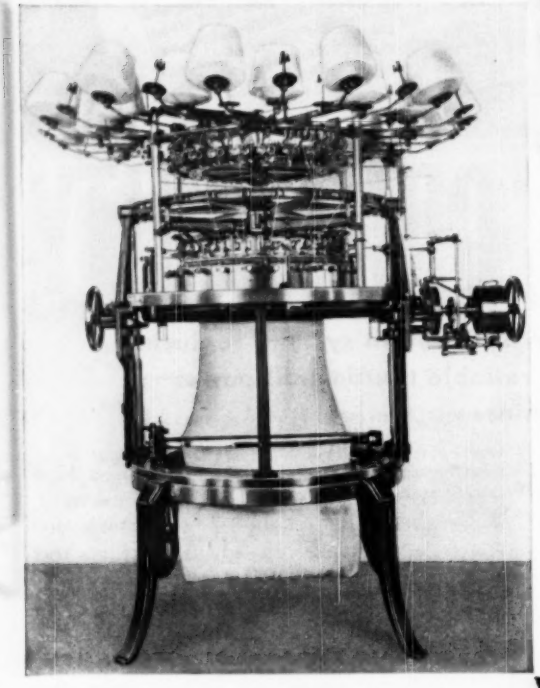
GENERAL ELECTRIC

654-7

WHEN you want TOP PERFORMANCE

in the production of

SPORTSWEAR
UNDERWEAR
DRESS FABRICS
OUTERWEAR



Popular sizes 26" and 30". Also other sizes from 15" up. Furnished in all cuts up to 24 needles per inch. Write for complete information.

the WILDMAN 30" INTERLOCK MACHINE

Top performance in terms of maximum production, high efficiency—there's your reason for specifying the WILDMAN Interlock Machine . . . This machine is built on a special size frame to provide ample width in the take-up for the exceptionally wide fabric produced . . . One of WILDMAN'S examples of engineering "know-how" always at your service.

WILDMAN MFG. CO.
NORRISTOWN, PA.

extremely hard
wear resistant
uniform
accurate

AlSiMag Tension Rings are made in any size and weight you require. Since I.D. sizes are normally greater than ⅜", light weights are obtained by making the rings thin. Rings as thin as 0.028" are regularly produced at reasonable cost. They are hard, wear resistant and surprisingly resistant to breakage from impact.

Rings as thin as 0.028" are thoroughly practical from the standpoint of original cost and from breakage in use. Rings thinner than 0.028" can be produced but at sharply increased cost. As the rings become thinner there is a much higher breakage in manufacture and in use.

AlSiMag Tension Rings have long been used on full fashioned machines, circular knit machines and on tension devices on winding, twisting and drawing machines. Reports on AlSiMag 192 rings indicate that they are turning in exceptional performance records on monofilaments and all synthetic fibers.

The proper weight and size of ring can make a material improvement in your speed and quality of production. The extra long life of AlSiMag 192 Tension Rings is an extra dividend.

AlSiMag Tension Rings are made in any size and weight you desire.

TEST SAMPLES: Samples available from our file are sent without charge. Samples can be hand made to your specifications promptly and at reasonable cost. If you will test these samples we believe you will find them FAR LOWER IN COST per pound of yarn processed. Every mill test reported to us has shown substantial cost savings.

HERE ARE SOME OF THE MOST POPULAR SIZES AND APPROXIMATE WEIGHTS OF

AlSiMag TENSION RINGS

AlSiMag No. 19185
WEIGHT: 0.212 Grams
I.D.: 0.385"
THICKNESS: 0.048"

AlSiMag No. 20041
WEIGHT: 0.306 Grams
I.D.: 0.469"
THICKNESS: 0.050"

AlSiMag No. 20776-A
WEIGHT: 0.229 Grams
I.D.: 0.437"
THICKNESS: 0.050"

AlSiMag No. 20776-B
WEIGHT: 0.166 Grams
I.D.: 0.437"
THICKNESS: 0.033"

AlSiMag No. 21088-A
WEIGHT: 0.322 Grams
I.D.: 0.482"
THICKNESS: 0.050"

AlSiMag No. 21088-B
WEIGHT: 0.180 Grams
I.D.: 0.482"
THICKNESS: 0.028"

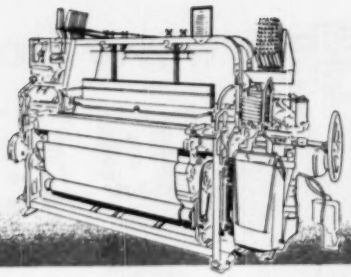
AlSiMag No. 21501
WEIGHT: 0.408 Grams
I.D.: 0.625"
THICKNESS: 0.062"

AMERICAN LAVA CORPORATION

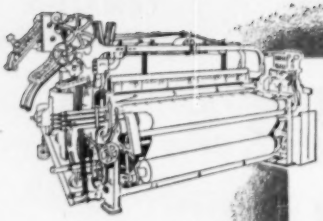
49TH YEAR OF CERAMIC LEADERSHIP

CHATTANOOGA 5, TENNESSEE

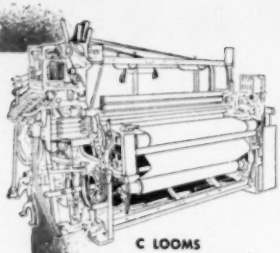
Offices: METROPOLITAN AREA: 671 Broad St., Newark, N. J., Mitchell 2-8159 • CHICAGO, 228 North LaSalle St., Central 6-1721 • PHILADELPHIA, 1649 North Broad Street, Stevenson 4-2823 • LOS ANGELES, 232 South Hill Street, Mutual 9076 NEW ENGLAND, 38-B Brattle St., Cambridge, Mass., Kirkland 7-4498 • ST. LOUIS, 1123 Washington Ave., Garfield 4959



S LOOMS



W LOOMS



C LOOMS

World's Longest Line of Looms

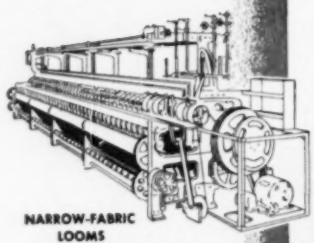
...built by

This "Invisible Trademark" Stands Back of the Trademarks of the World's Finest Woven Fabrics

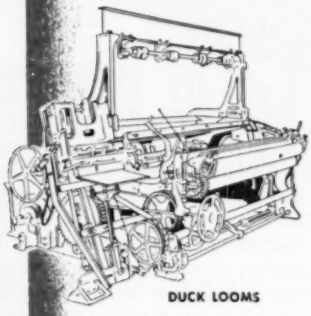
CROMPTON & KNOWLES LOOM WORKS

WORCESTER 1, MASSACHUSETTS, U. S. A.

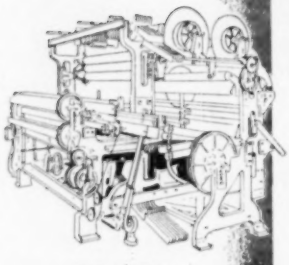
PHILADELPHIA, PA. • CHARLOTTE, N. C. • ALLENTOWN, PA.
CROMPTON & KNOWLES JACQUARD & SUPPLY CO., PAWTUCKET, R. I.



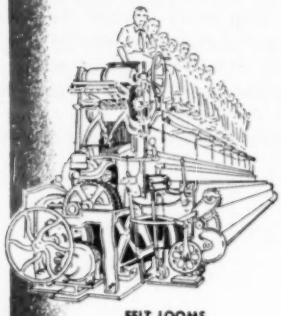
NARROW-FABRIC LOOMS



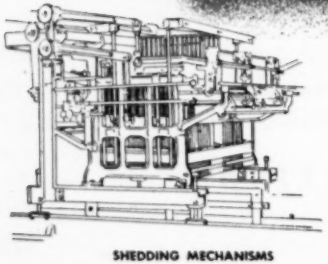
DUCK LOOMS



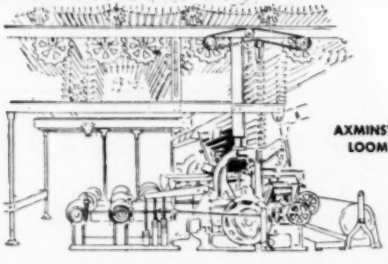
PLUSH LOOMS



FELT LOOMS



SHEDDING MECHANISMS



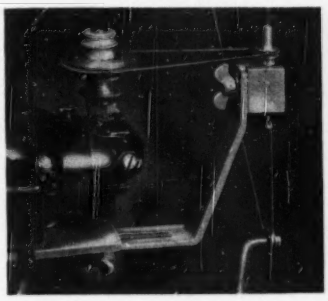
AXMINSTER LOOMS

Avisco Develops Method of Measuring Evenness of Low-Twist Filament Yarns

New "Rotafil"* device increases accuracy of results

A device for continuously measuring evenness of low-twist filament yarns has been developed by Avisco's Textile Research Department. Yarns with low twist or zero twist have long posed a difficult problem in evenness measurement, because these yarns have a tendency to flatten as they pass over guides. Their shape may vary from circular to flat or ribbon-like.

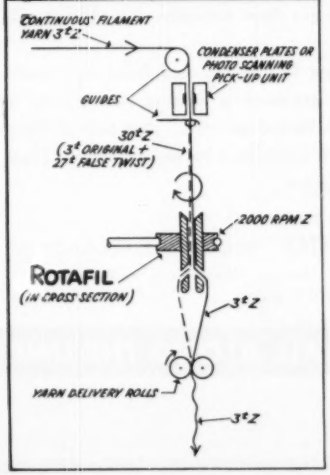
When running through conventional measuring devices, the flattened yarn presents alternating flats and edges to the light beam or electric pick-up element which falsely records this uneven silhouette as an irregularity in linear density.



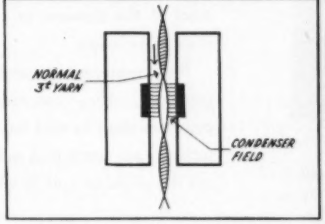
The new "Rotafil" unit overcomes this difficulty by twisting the yarn within the pickup element . . . measuring the twisted yarn and then removing the twist. A simple false-twisting tube with accurate guides is used to accomplish these results. This method eliminates the form factor by increasing the number of flats and edges in the pick-up area, by keeping their number constant and by rotating the yarn on its axis.

The development of "Rotafil" is an outgrowth of Avisco's constant efforts to encourage the production of better fabrics. It is being offered to the textile industry on a non-exclusive royalty-free basis...as a contribution to the maintenance of high quality standards. Complete information, photographs, drawings and other data are available on request. A demonstration of the machine can be arranged at the Textile Research Department in Marcus Hook, Pa., on appointment. *Patent applied for.

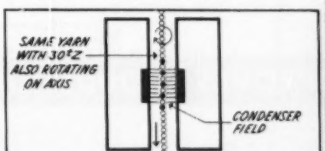
PRINCIPLE OF "ROTAFIL" OPERATION



ENLARGEMENTS OF PICK-UP AREA



Shows how uneven form of 3 T yarns within condenser field will affect capitance because of form factor changes.



Shows how high twist and rotation on its axis presents uniform factor within field.

MAKE USE OF *Avisco* 4-PLY SERVICE

To encourage continued improvement in rayon fabrics, American Viscose Corporation conducts research and offers technical service in these fields:

1 FIBER RESEARCH
2 FABRIC DESIGN
3 FABRIC PRODUCTION
4 FABRIC FINISHING

AMERICAN VISCOSE CORPORATION

America's largest producer of rayon

Sales Offices: 350 Fifth Avenue, New York 1, N. Y.; Charlotte, N. C.; Cleveland, Ohio; Philadelphia, Pa.; Providence, R. I.

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Box 4072
Atlanta, Georgia
Phone Walnut 5250

Jack Dempsey
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Phone 5-5021

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Gaspee Plateau
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They get around . . . run into all kinds of carding problems . . . know most of the answers or can get them promptly . . . willingly share their knowledge.

They represent a complete line of the very finest card clothing products. They are more interested in making you a long term customer than in making an immediate sale. Ask one of them to survey your cards and get his suggestions for improvements. There is not the slightest cost or obligation.

HOWARD BROS. MFG. CO. WORCESTER 8, MASSACHUSETTS

Southern Plants: Atlanta, Ga. and Gastonia, N. C. **Branches:** Philadelphia, Pa. and Blanco, Texas
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A-4

TUFFER CARD CLOTHING — **IMPROVES PRODUCTION ALL ALONG THE LINE**

A winning combination—and present in any fabric woven with a high percentage of TECA fiber.

TECA is an Eastman trade-mark. It identifies a short *crimped* fiber made by Eastman from cellulose acetate—a fiber otherwise known as estron or acetate rayon staple.

There is only one TECA fiber. Specify it. Feature it—in suitings, shirtings, and sportswear. For information about TECA, consult A. M. Tenney Associates, Inc., 10 East 40th Street, New York 16, sales representatives for TENNESSEE EASTMAN CORPORATION.

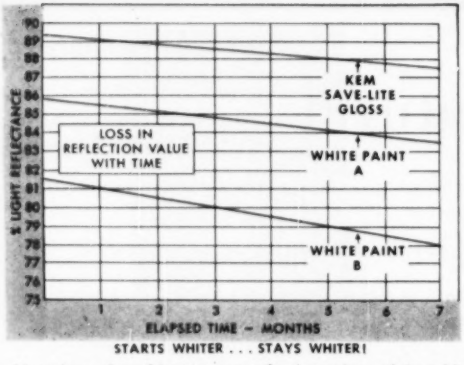
Tennessee Eastman Corporation

(Subsidiary of Eastman Kodak Company)

KINGSPORT, TENNESSEE

MAKE THIS TEST

before you paint your plant!



STARTS WHITER . . . STAYS WHITER!

Note how the whiteness, or reflective value, of Save-Lite *starts* higher than conventional finishes when first applied, and *continues* higher, as time goes on. This means *longer* intervals before repainting is required.

Compare KEM SAVE-LITE with ordinary whites

SEE why it stays cleaner—longer!

See for yourself the difference there can be in the whiteness of "white" finishes . . . even when they are first applied! Make a side-by-side comparison of KEM SAVE-LITE Mill White against conventional white finishes on any wall surface in your plant.

You can see the difference, from the start, in gleaming, brilliant whiteness...a difference because of the *controlled*, light-reflective properties that are designed into SAVE-LITE Mill White Finishes.

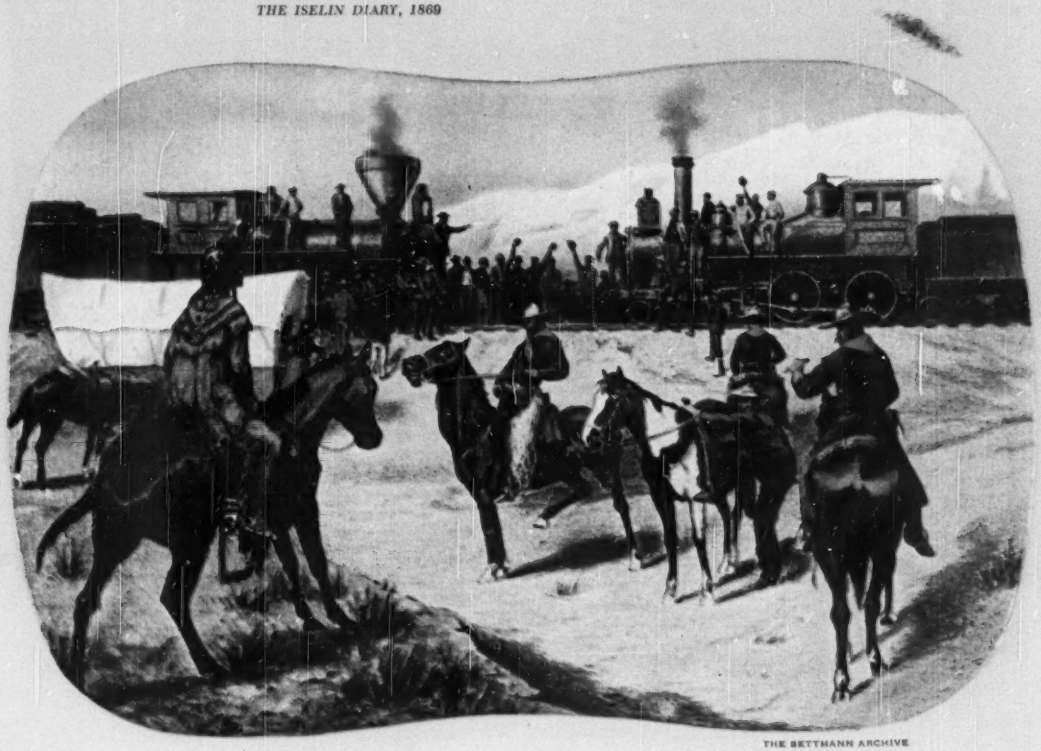
KEM SAVE-LITE *starts* whiter . . . KEM SAVE-LITE *stays* whiter, as the actual light reflectometer measurements in the comparative chart show. You'll find these same properties, too, enable it to hide better and cover farther! Call your Sherwin-Williams representative today for a demonstration, or write The Sherwin-Williams Co., Cleveland 1, O. (Division Offices, Charlotte, N. C. and Boston, Mass.)

SHERWIN-WILLIAMS

INDUSTRIAL MAINTENANCE FINISHES

SAVE-LITE MILL WHITE • COLOR HARMONY FINISHES
MILL VILLAGE PAINTS

Driving of the last spike in the first transcontinental railway has linked the East more closely to the growing West.
THE ISELIN DIARY, 1869



THE BETTMANN ARCHIVE

The ties that bind...

Across a million railroad ties, East joined hands with West, and a new era of economic unity and growth began. Growing pains were felt in every business. Many manufacturers turned to Iselin for counsel and aid in developing financial programs to meet expansion needs . . . Today, as for more than 140 years, Iselin's Factoring service aids healthy business growth, speeding capital turnover, eliminating credit risks . . . Our service, vital to the expansion of many successful businesses, can help you. Send for booklet on our Factoring service to industry.

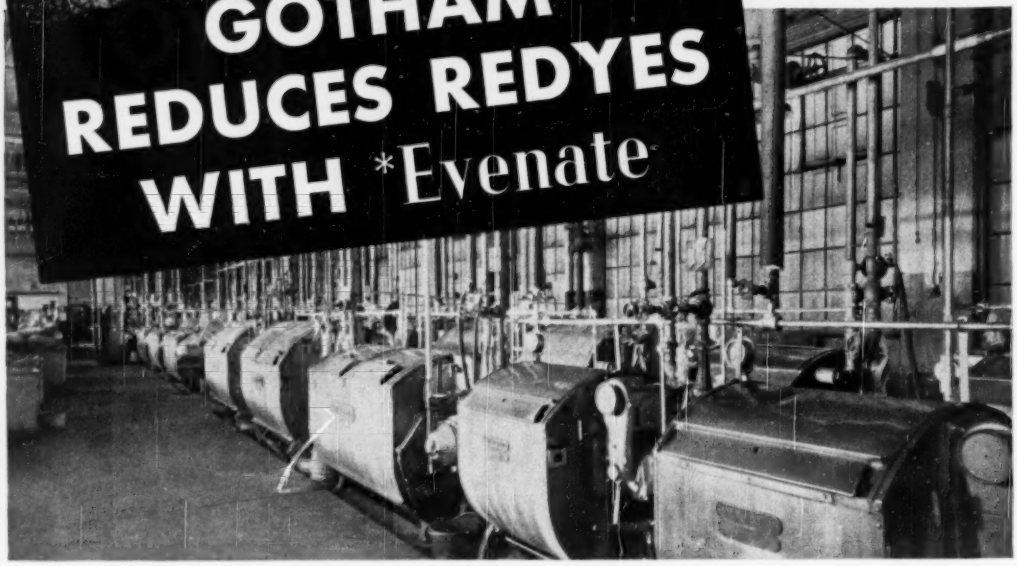
William Iselin & Co., Inc.

357 Fourth Avenue, New York 10, N.Y.
200 Keeler Building, Grand Rapids 2, Mich.

FOUNDED IN 1808

GOTHAM REDUCES REDYES WITH *Evenate

*Evenate is a thin paste readily soluble in the dyebath. It is a non-ionic condensate combined with a glyceride.



The makers of Gotham Gold Stripe Hosiery are constantly looking for new ways to improve production techniques and enhance hosiery values. With Evenate, the Gotham dyehouse in Philadelphia has found a way to cut redyes, achieve better unions between leg and welt, speed up pairing operations.

Evenate is the amazing new dye leveling agent that assures better control of dyebath, better penetration. Evenate reduces shade, maintaining union without stripping. Saves labor, saves dyes and finishes, frees dyehouse for other work.

Evenate also makes redyeing more economical. Reduces the number of shade variations in mixed dye lots. Non-foaming. Works equally well with acid colors and acetate dyes.

Try Evenate in your production. Let us give you full details.

AMALGAMATED CHEMICAL CORPORATION
Philadelphia 34, Penna.
Southern Division: 1819 Spring Garden Street, Greensboro, North Carolina

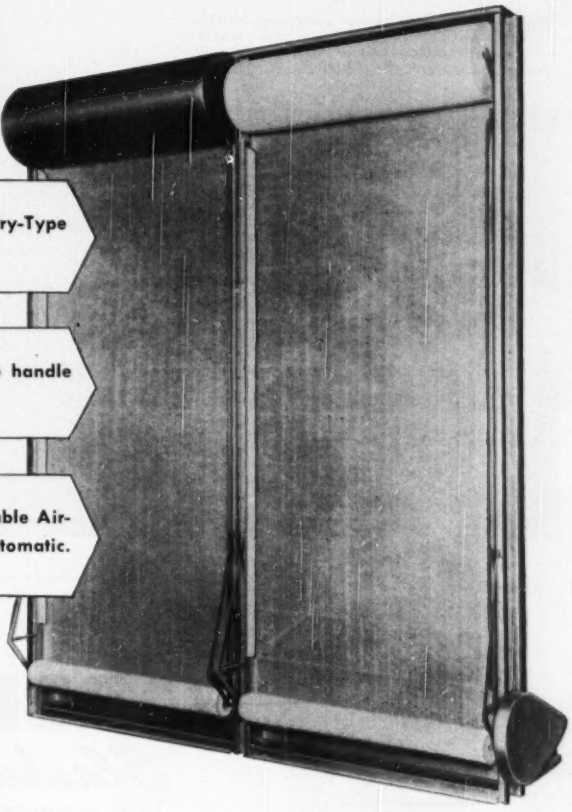
Amalgamated

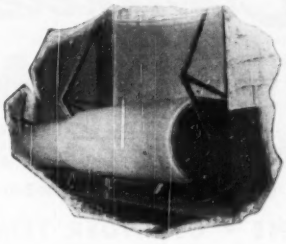
Auto·AIRMAT

IT'S NEW—An Automatic Self-Cleaning Dry-Type Filter—the first in the field.

IT'S PROVED—Mill tests prove ability to handle heavy lint concentrations.

IT'S PRACTICAL—Uses low cost, disposable Airmat paper as filter media. Operation entirely automatic.





Now you can really lick that lint problem and save money in the bargain. Auto·AIRMAT is designed to handle heavy lint concentrations in the return air from weaving and spinning rooms. And—this is important—it does the filtering job without the costly maintenance usually associated with this operation.

Auto·AIRMAT uses Airmat Paper as the filtering media. This paper is low in cost and makes disposing of used media more economical than reconditioning. The filter is made in vertical sections. The Airmat Paper from the roll at the top moves on a continuous screen down the face of the filter and is rerolled automatically at the bottom. The lint and dust collected are rolled up with the paper for later disposal.

The screen is rotated by an electric motor while the frequency of curtain movement and the distance it travels is controlled by a pressure switch. This switch is actuated by the resistance differential across the curtain and may be set at any maximum operating resistance.

Auto·AIRMAT is another "first" from AAF—the world's largest exclusive manufacturer of air filter equipment. Write today for Bulletin No. 234 giving complete data on this new automatic self-cleaning dry-type filter.

AMERICAN AIR FILTER COMPANY, INC.
275 Central Avenue
Louisville 8, Kentucky

Please send me copy of AAF Bulletin No. 234 describing the new Auto·AIRMAT.

Name_____

Company_____

Street_____

City_____ State_____

®AAF

AIR FILTERS
AND ELECTRONIC PRECIPITATORS

Below, the Barber-Colman *Electronic* MOISTURE CONTENT CONTROLLER which automatically maintains the desired moisture content throughout the entire loom beam.

Complete

BARBER-COLMAN

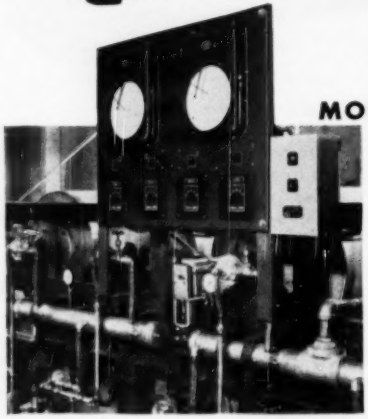
Slasher Room Controls

AT U. S. RUBBER COMPANY, WINNSBORO MILLS

MOISTURE CONTENT • CYLINDER TEMPERATURE

SIZE LEVEL • SIZE COOKING

All Automatically Controlled



Above, the Barber-Colman CYLINDER TEMPERATURE CONTROLLER panel which automatically operates steam valves to maintain desired temperatures in the cylinders. The smaller panel is the SIZE LEVEL CONTROLLER which automatically holds the specified level of size in the size box.

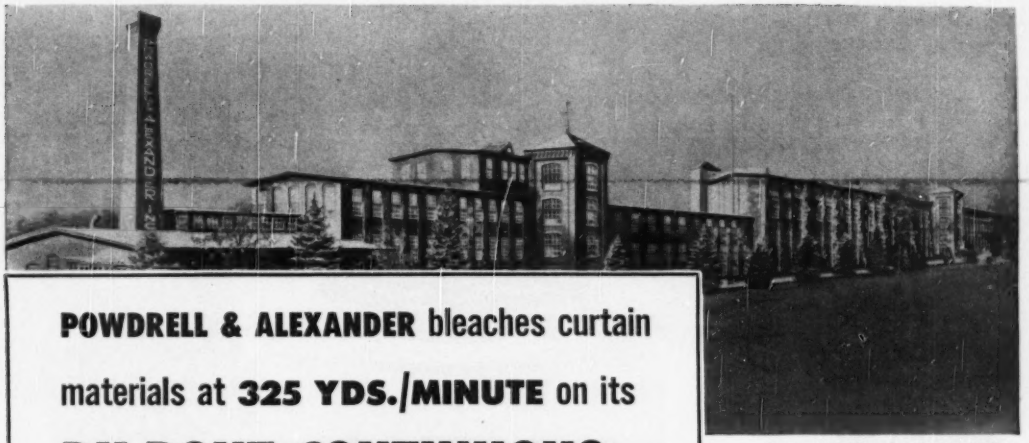
Barber-Colman Company, with years of experience in textile processes, provides complete automatic control equipment that will help Lower Costs, Increase Production, and Improve Products. *See your Barber-Colman representative for details.*

Right, the Barber-Colman TEMCHROM SIZE COOKING CONTROLLER which automatically governs the selected sequence of cooking and holding operations in the size preparation tanks.

BARBER COLMAN

BARBER-COLMAN COMPANY, Rockford, Illinois

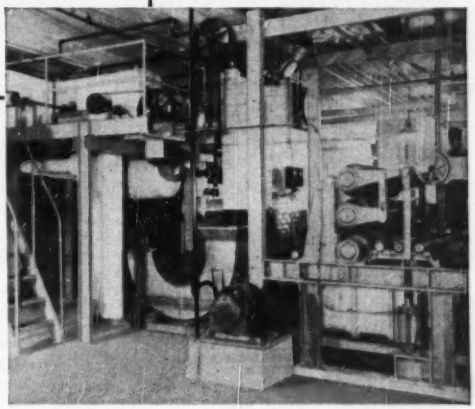
Boston, Mass. • Greenville, S. C. • Atlanta, Ga. • Greensboro, N. C.



Powdrell & Alexander Company Mill at Danielson, Connecticut.

POWDRELL & ALEXANDER bleaches curtain materials at 325 YDS./MINUTE on its

DU PONT CONTINUOUS PEROXIDE SYSTEM



Du Pont rope (double-strand) unit at Powdrell & Alexander Co. Mill.

FOR SEVERAL YEARS, this important Connecticut mill has been using a Du Pont Continuous Bleach Range to handle curtain materials.

Consistently good quality at high production rates is reported in operating the process double-strand. That is, two strands of fabric are bleached simultaneously in the same equipment. With this method, production at rates approximating 325 yards per minute is being handled *without operating at excessive speeds.*

The Powdrell & Alexander Company's complete satisfaction with its system is a further example of the wide acclaim the Du Pont process has received throughout the textile industry. Continuous Peroxide Bleaching is easy to set up, operate and control in small, medium or large plants. Why not investigate its economy and practicability for your own operations right now? Send the coupon below for our new book which illustrates typical installations and gives other important information.

TO BLEACH MORE GOODS—*Quickly and Economically*

There's a Du Pont System to meet your specific requirements. Du Pont technical service men will help you select equipment and start up your process. Just write E. I. du Pont de Nemours & Co. (Inc.), Electrochemicals Dept., Wilmington 98, Delaware.

Tune in Du Pont "Cavalcade of America" Tuesday nights—NBC coast to coast

DU PONT CONTINUOUS PEROXIDE BLEACHING

DU PONT

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BETTER THINGS FOR BETTER LIVING
...THROUGH CHEMISTRY

E. I. du Pont de Nemours & Co. (Inc.)
Electrochemicals Department, Wilmington 98, Del.

Please send me more information about Du Pont Continuous Peroxide Bleaching Systems.

Name_____ Title_____

Firm_____

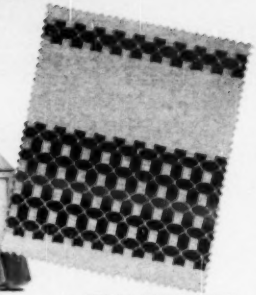
Street & No._____

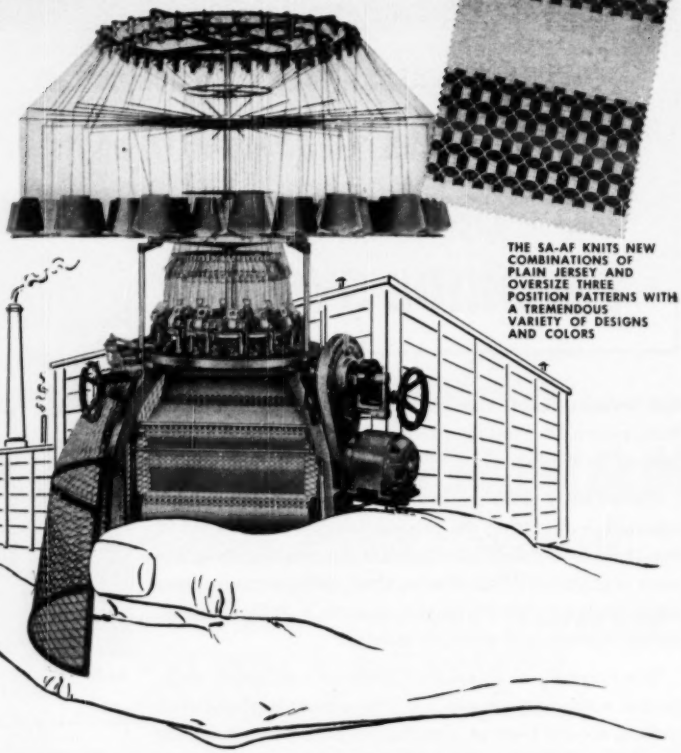
City_____ State_____

Meet a ONE-MACHINE KNITTING MILL

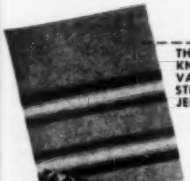
MODEL SA-AF—

Latest and Greatest
Of Supreme's World's
Fastest Stripers
Gives You Multiple
Production Power Plus
New Product Possibilities



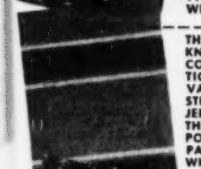


THE SA-AF KNITS NEW COMBINATIONS OF PLAIN JERSEY AND OVERSIZE THREE POSITION PATTERNS WITH A TREMENDOUS VARIETY OF DESIGNS AND COLORS



THE SA-AF KNITS VARIABLE STRIPED JERSEY

THE SA-AF KNITS THREE POSITION JACQUARD-TYPE PATTERN WHEEL WORK



THE SA-AF KNITS COMBINATIONS OF VARIABLE STRIPED JERSEY AND THREE POSITION PATTERN WHEEL WORK

THE SA-AF KNITS MULTI-COLORED PLAIDS AND CHECKS

THE SA-AF KNITS:
IN-LAY FLEECE FABRICS
RUBBER IN-LAY FABRICS
KNIT AND TUCK CONSTRUCTIONS
KNIT AND WELT CONSTRUCTIONS

SK-136

With the new Model SA-AF you get the knitting ability of the entire Supreme-line of stripers and pattern wheel machines – PLUS – a new range of patterning, heretofore impossible.

On one machine you get multi-machine versatility at revolutionary high production rates. You can knit any of the fabrics listed on this page. Switch from one to another quickly and simply. And to top it off, you can knit market-appealing, new combinations of plain jersey and *double size* three position patterns with a tremendous variety of designs and colors.

The Model SA-AF has 32 feeds, each with a three position pattern wheel and a new-type Pattern Placer. The Pattern Placers allow individual control of the pattern at each feed. By means of simple chain link control, unlimited repeats of oversize multicolored pattern area may be obtained in combination with any length of plain jersey. The 16, four-color, constant-feeding Striping Boxes are independently controlled by a simple, chain-link-actuated floating cam. Colors in the pattern area may be easily changed whenever desired.

As on all Supreme machines, the stationary yarn stand makes possible higher RPM and minimizes maintenance. It lets you make "pig-tail" double tie-ups . . . use each cone to the end. Synchronized "No-Waste" cutters* eliminate all yarn waste.

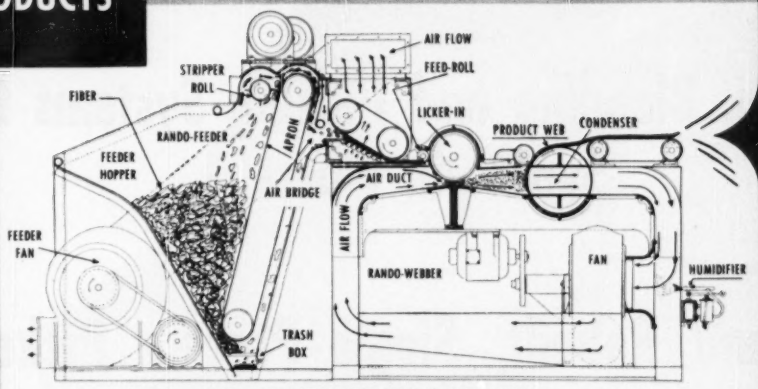
Write for further information and fabric swatches.

*Patents Applied for

SUPREME
KNITTING MACHINE CO., INC.
107 JOHNSON AVE. BROOKLYN 6, NEW YORK, N.Y.

NEW APPROACH TO NEW TEXTILE PRODUCTS

This Amazing Machine Lays a Uniform Random Web from Waste Fibers



FLOW DIAGRAM COMBINED RANDO-FEEDER AND RANDO-WEBBER

HEAVY MATS • WADDING • INDUSTRIAL NON-WOVEN FABRICS • FELTS • HOUSEHOLD NON-WOVEN FABRICS

*T.M. Reg. Curlator Corp., Rochester, N. Y.

RANDO-FEEDER* AND RANDO-WEBBER*

In order that a wide variety of low cost, short staple waste fibers be processed into a random web they must first be uniformly fed, lengthwise and crosswise, into a machine, such as a RANDO-WEBBER. The RANDO-FEEDER meets these needs.

RANDO-FEEDER. In operation the fiber is transferred from the feeder hopper on the pins of an apron, past a stripper to an air bridge. Fiber is carried over and pulled as needed into a wedge-shaped opening between screen and roller conveyor forming a uniform, compact feed for the RANDO-WEBBER. Excess fiber returns to the hopper while tramp metal and other heavy trash are deposited in the trash box as neither will cross the air bridge. The feed of the web machine and screen section operates as a unit. Increasing speed automatically increases output of feeder.

RANDO-WEBBER. The mat of fiber developed by the RANDO-FEEDER is fed directly to the high-speed licker-in. Fibers are doffed from licker-in teeth into air stream in the throat of a Venturi-like duct, and deposited on a rotating circular condenser screen. Speed of screen determines web thickness. Web is carried from screen in continuous flow by rubberized belt conveyor.

TURN YOUR WASTE FIBERS INTO $$$'s.

Write for new Random Web Process Bulletin 101 and for a demonstration of the processing of your fibers.

TEXTILE DIVISION
CURLATOR
CORPORATION
ROCHESTER 10, NEW YORK

Curlator Corporation, Textile Division
501 Blossom Road, Rochester 10, New York

- ☐ Please schedule a demonstration
- ☐ Please make up samples from my own waste
- ☐ Please send Random Web Bulletin 101

NAME .....
COMPANY .....
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Complete Blending, Opening, Cleaning and Picking Systems for Cotton Mills

Opening, Blending and Picking Systems for Synthetic Fibers

New, and Rebuilt, Single-Process Pickers

The Aldrich Synchronized Single Process Picking System has consistently produced more uniform card sliver than any other picking system.

Parts for Kitson Pickers Always in Stock for Immediate Delivery

AldricH MachinE

Greenwood WorkS South Carolina

Celanese* Acetate Rayon
Gives You These Selling Extras

- A rich, full hand—perfect comfort with less weight
- Unlimited style effects through cross-dyeing
- Wrinkle-resistance for continued neatness—creases that keep their sharpness
- Moth, mold and mildew resistance
- High dimensional stability

They're Wrinkle-Resistant . . . *thanks to Acetate*

These days a man need no longer choose between a suit that's cool-but-wrinkled and a suit that's neat-but-hot. For Celanese* acetate staple fiber has made possible rayon suitings . . . firm, springy fabrics that stay neatly in-press right around the clock.

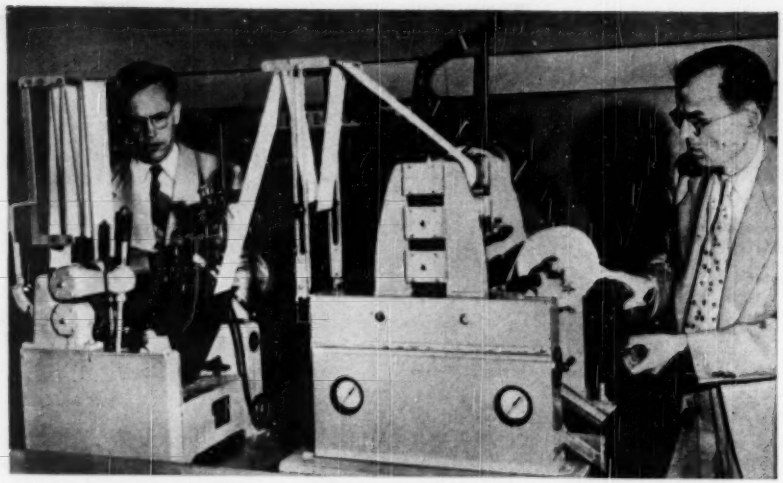
And this same Celanese staple also gives the booming summer suit business rayon fabrics that are dimensionally stable. It makes possible the beautifully and inexpensively styled, fancy, cross-dye patterns.

For *lively* rayon suitings and a *lively* summer suit business, make sure the fabrics you feature have a substantial Celanese acetate staple content.

Celanese Corporation of America, 180 Madison Avenue, New York 16. Available in Canada from Canadian Cellulose Products Limited, Montreal.

Celanese* **Staple Fiber of Acetate Rayon**

*Reg. U. S. Pat. Off.



Continuous dyeing unit used in dye research at the laboratories of Calco Chemical Division, American Cyanamid Co., Bound Brook, N. J. The pad box, in the unit at left, is made of corrosion-resistant Inconel.

CALCO LAB STUDIES SHOW *INCONEL* BEST FOR HANDLING DYE SOLUTIONS

"We have used Inconel . . . and consider it the best material we know of for preventing discoloration or metal pickup in dyeing . . .

"Previous tests on dyes by our metallurgists have shown that Inconel has less effect on the dye product than any other material we have tried except glass."

The quotation above is from a report made by the metallurgist of the Calco Chemical Division, American Cyanamid Company at Bound Brook, New Jersey.

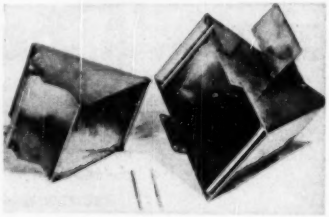
In well-equipped laboratories, Calco research men are constantly studying the many complex problems of dye production and use. To facilitate these studies, ingeniously-designed laboratory equipment simulates actual production methods. Included in this equipment is apparatus for continuous dyeing, which permits studies of color matching, shade changes, and ideal dye bath composition.

In developing this equipment, Calco designers had to overcome certain problems in materials selection . . . especially for the vital pad box which contains the dye solutions. In their own words: *"We wanted particularly to obtain freedom from rust contamination and iron pickup, since these adversely affect the shade of some dyes."*

Pad boxes made of Inconel® solved this problem to Calco's satisfaction. But that is not surprising, for Inconel is highly resistant to corrosion by most textile dyestuffs.

Still other advantages . . . Inconel can be readily fabricated . . . can be welded, brazed, or soldered. Welds in Inconel are as fully corrosion-resistant as the parent alloy itself.

Write, today, for full engineering information. Remember, too, that our Technical Service Department is always ready to help you solve application problems.



Component parts of a pad box, used in continuous dying apparatus at Calco Chemicals Division laboratories. They are made of Inconel to minimize metal pickup and stop rust-fouling of dye solutions.

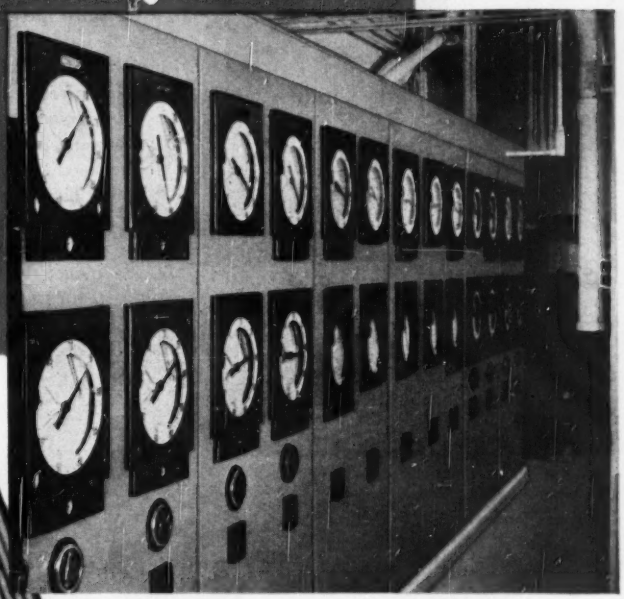
EMBLEM OF SERVICE
NICKEL INCO TRADE MARK ALLOYS

MONEL® • "R"® MONEL • "K"® MONEL • "KR"® MONEL • "S"® MONEL
NICKEL • LOW CARBON NICKEL • DURANICKEL®
INCONEL® • INCONEL "X"®

THE INTERNATIONAL NICKEL COMPANY, INC.
67 Wall Street, New York 5, N. Y.

SUPER-SENSITIVE, DIRECT MEASUREMENT OF RELATIVE HUMIDITY

...with the ElectroniK RECORDING HYGROMETER



▲ *ElectroniK Hygrometers on centralized panelboard.*

◀ *New Honeywell* **electronic** *humidity sensing element.*

There's news in a super-sensitive electronic humidity element with a 10 second speed of response! And this instrument records the actual relative humidity . . . interpolation from psychrometric charts is no longer necessary. Add to that the fact that it is calibrated to ±1% accuracy and you begin to realize what this faster, closer check on relative humidity can mean in improved operations through increased efficiency of machines and personnel.

Here are more outstanding advantages of the *ElectroniK* Hygrometer:

- ***Senses changes between limits of 30% and 93% RH.***
- ***Can also be supplied with 20% RH span within these limits.***
- ***Possesses full temperature compensation between 50° and 120° F.***
- ***Available with any type of control.***

Your local Honeywell engineer is ready to give you more detailed information, in terms of your application. Call him today . . . he is as near as your phone! MINNEAPOLIS-HONEYWELL REGULATOR CO., *Industrial Division*, 4492 Wayne Ave., Philadelphia 44, Pa. Offices in more than 80 principal cities of the United States, Canada and throughout the world.

WHAT THE *ElectroniK* HYGROMETER MEANS TO YOU

- Closer humidity control than heretofore possible.
- Elimination of water lines, wicks, porous tubes and other accessories.
- Centralization of instruments . . . affording supervision of remote measurements from a single location.
- Ample power to operate any type of control.
- Design, operation and accuracy exceeding normal specification requirements.

MINNEAPOLIS **Honeywell**

BROWN INSTRUMENTS

Time was, you remember, when housewives not only made the family's clothes, but spun the thread as well.

It's different today. Twenty million spindles help spin finer yarns for fabrics that clothe, shelter and comfort the nation and the world. They spin smoothly, too . . . faster and more profitably on modern SKF anti-friction bearings.

Ever since 1904, SKF has anticipated the needs of the textile industry for higher speeds, lower power consumption, more uniform and consistently dependable production. Progressive textile mill men know that for every changeover—not only on spindles but on pickers, cards, tension pulleys, in fans, motors or wherever shafts turn,—there are good reasons why they can depend on real help from SKF bearing engineers. Equipment manufacturers, too, not only in textile machinery but in *all* industry, recognize SKF engineering as the pioneering kind. **SKF** INDUSTRIES, INC., PHILADELPHIA 32, PA., *the Pioneers of the Deep-Groove Ball Bearing, Spherical Roller Bearing, Self-Aligning Ball Bearing.*

7032

SPINNING SPINDLES
. . . SPIN A GOOD YARN

SKF

BALL AND ROLLER BEARINGS

8 REASONS WHY SKF IS PREFERRED BY ALL INDUSTRY

Integrity · Craftsmanship · Metallurgy · Tolerance Control · Surface Finish · Product Uniformity · Engineering Service · Field Service

COTTON loves the sun

DU PONT VAT COLORS on cotton are colors that will still look bright after being exposed to sunlight, laundering, perspiration, etc. They yield the best over-all fastness available on cotton today.

The Du Pont line includes PONSOL* (anthraquinone-type dyes), SULFANTHRENE* (thioindigoid and related dyes), and LEUCOSOL* (specially prepared anthraquinone types for printing). Why not investigate these colors? Our Technical Staff will work with you in turning out dye jobs which assure customer color-satisfaction.

E. I. du Pont de Nemours & Co. (Inc.), Dyestuffs Division, Wilmington 98, Delaware.

*REG. U. S. PAT. OFF.

Always dye with an eye to the end use

Du Pont Dyestuffs

DU PONT

REG. U. S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING...THROUGH CHEMISTRY

Photo courtesy Celanese Corporation of America. Yarn content: Warp — Celanese acetate rayon dull filament; Filling — Celanese acetate rayon bright staple.

A DURABLE GAS-FADING INHIBITOR

ARIPERM P M

Gives fabrics composed partially or wholly of

Acetate Rayon

— lasting protection against fading from atmospheric gases

— with excellent resistance to *WASHING AND DRY CLEANING*

Recommended for dyeing Light Shades, Pastels & Tints as well as medium and heavy shades.

With Ariperm P M there is no appreciable yellowing effect on white goods when exposed in the gas chamber — relatively little effect on light fastness of the color.

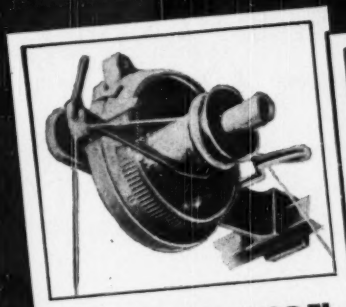
Simple application in scouring or directly in the dye bath.

Write for Technical Service Bulletin #201-121.1

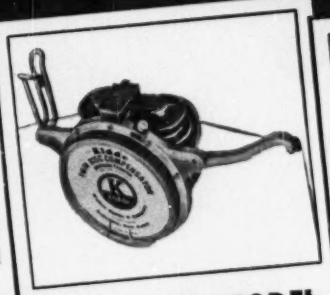
Arkansas Co. INC.

NEWARK, NEW JERSEY

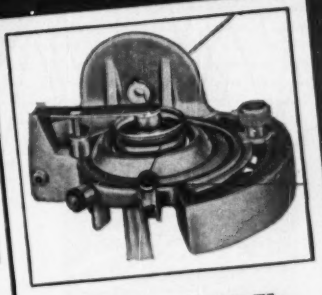
What are YOUR Tension Problems?



STANDARD MODEL



TWIN DISC MODEL



WARP MODEL

SEE Kidde

SPECIALISTS IN TEXTILE TENSIONS

Kidde Tension Compensators are precision devices that take the variables out of yarn tensioning. The Standard Model, which has proved the theory of tension compensators in many large plants, is designed for average speeds and tensions. The Twin Disc Model is especially useful for extreme speeds and tender yarns—passes knots at high speed. The Warp Model is small and inexpensive enough for warp beams—gives uniform beam tension, eliminates over-stressed yarns, prevents buckling of warp beam.

Whatever your tension problems, let Kidde help you find the answer.

Walter Kidde & Company, Inc., 1290 Main Street, Belleville 9, N. J.
Walter Kidde & Company of Canada, Ltd., Montreal, P. Q.

Kidde

Kidde

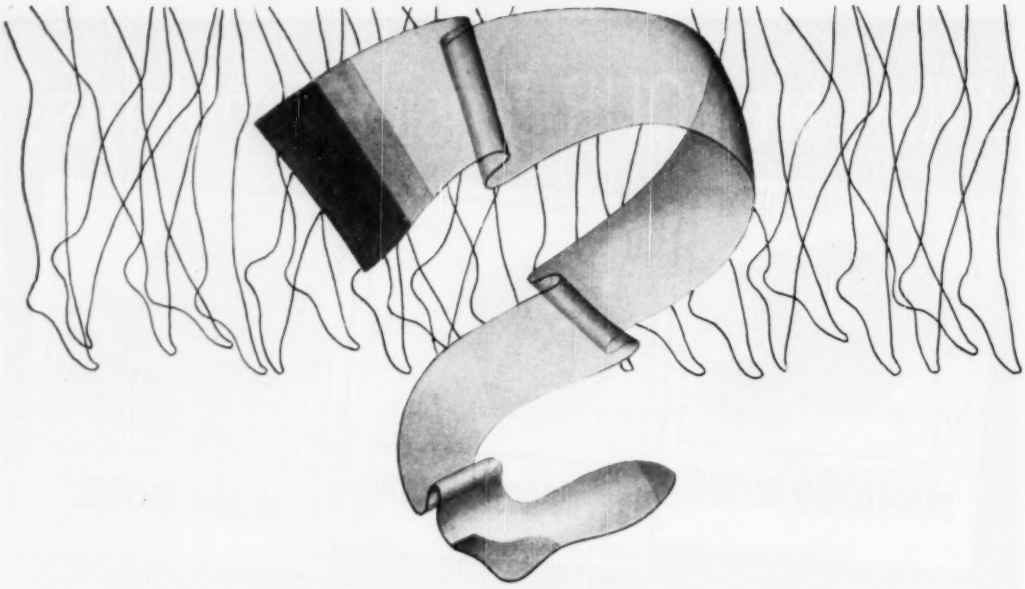
Walter Kidde & Company, Inc.
1290 Main Street, Belleville 9, N. J.

Gentlemen:
Send me information on Tension Control for your type of application.....

NAME.....

ADDRESS.....

CITY.....STATE.....



nylon?

Remember 1943? Hosiery producers were unable to obtain Nylon for the manufacture of full-fashioned hosiery, because of military needs, and had to resort to rayon. Is history about to repeat?

If so, it will profit you to remember yet another fact about 1943: When rayon had to be utilized, and throwsters were faced with the problem of supplying yarns which had sufficient elasticity and tensile strength—yarns not too harsh, and without tendency to kink—Nopco's Hosiery Treatments №1 and №2 supplied the answers.

NOPCO HOSIERY TREATMENT #1 is a solvent-soluble, high melting point, synthetic wax, specifically formulated for full-fashioned rayon yarns. It can be used on ***all types*** of rayon yarns, even those containing some pretreatment. The excellent sizing resulting from this process, aids tremendously in setting and holding the twist in thrown yarn. Knitting results are decidedly superior. No difficulty is experienced in obtaining a clear, uniform stitch thruout the fabric. Press-offs are minimized.

NOPCO HOSIERY TREATMENT #2 is a water emulsified version of Nopco Hosiery Treatment №1. This treatment offers an excellent means for processing regenerated cellulose yarns. The emulsifying base retains its water absorbing properties even after the usual throwster's drying operation—an outstanding advantage in wet knitting. Treatment №2 may be used on ***all*** viscose and cuprammonium yarns, regardless of manufacture, denier or pretreatment. It provides a smooth, waxy coating on the yarn that protects filaments against abrasion, and imparts excellent twist setting properties which prevent kinking and snarling during knitting. A good stitch formation is obtained, with minimum press-offs. Snagging is considerably reduced during seaming and looping.

Should Nylon be "drafted" again for military duty, the hosiery industry will find the experience and specialized knowledge gained by Nopco in 1943, and since augmented, at its service. If history repeats . . . profit by letting us fill your requirements.

NOPCO

EVOLVED THRU RESEARCH

NOPCO CHEMICAL COMPANY

HARRISON, NEW JERSEY

Branches: Boston, Chicago, Cedartown, Ga., Richmond, Calif.

On cold mornings, when the oil in spinning frame bearings is stiff, as much as 250% extra horsepower is required just to start the frame. Such terrific starting loads tend to crack up and twist out cylinders when non-resilient drives, such as chains, are used. Gates Vulco Rope Drives—installed by a South Carolina Mill as shown in the picture—are resilient and absorb shocks. They give maximum insurance against cylinder failures and shut-downs.

If you want LOWER V-BELT COSTS, just make this simple test!

Just pick up *any* V-Belt and bend it—exactly as it bends when going around its pulley—and *see what happens!*

The top of the belt is put under tension; hence it grows *narrower.* The body the belt is under compression and *bulges out.*

This change of shape, due to bending a *straight-sided* V-Belt, is shown in figures 1 and 1-A. Note how the bulging sides are forced to press *unevenly* against the V-pulley. This naturally causes uneven wear on the sides—*concentrated wear* where the bulge is greatest.

Now look at figures 2 and 2-A. There you see how the bending changes the shape of the V-Belt that is built with the Concave Side—the Gates Vulco Rope. The precisely engineered concave side of this belt merely *fill out* and become perfectly straight. There is no side-bulge. This belt, when bent, *precisely fits its sheave groove.*

Because there is *no bulging,* the sides of the Gates Vulco Rope always press *evenly* against the V-pulley and therefore wear *uniformly* —resulting in *longer belt life* and *lower belt costs for you.*

Only V-Belts made by Gates are built with concave sides. Whenever you buy V-Belts, be sure that you get the V-Belt with the Concave Sides—The Gates Vulco Rope!

What Happens When a V-Belt Bends

Straight-Sided V-Belt

How Straight-Sided V-Belt Bulges in Sheave-Groove. Sides Press Unevenly Against V-Pulley Causing Extra Wear at Point Shown by Arrows.

Gates Vulco Rope with Concave Side

The Concave Side Fills Out to a Precise Fit in the Sheave Groove. No Side Bulge! Sides Press Evenly Against the V-Pulley—Uniform Wear—Longer Life!

CS-5011

GATES VULCO ROPE DRIVES

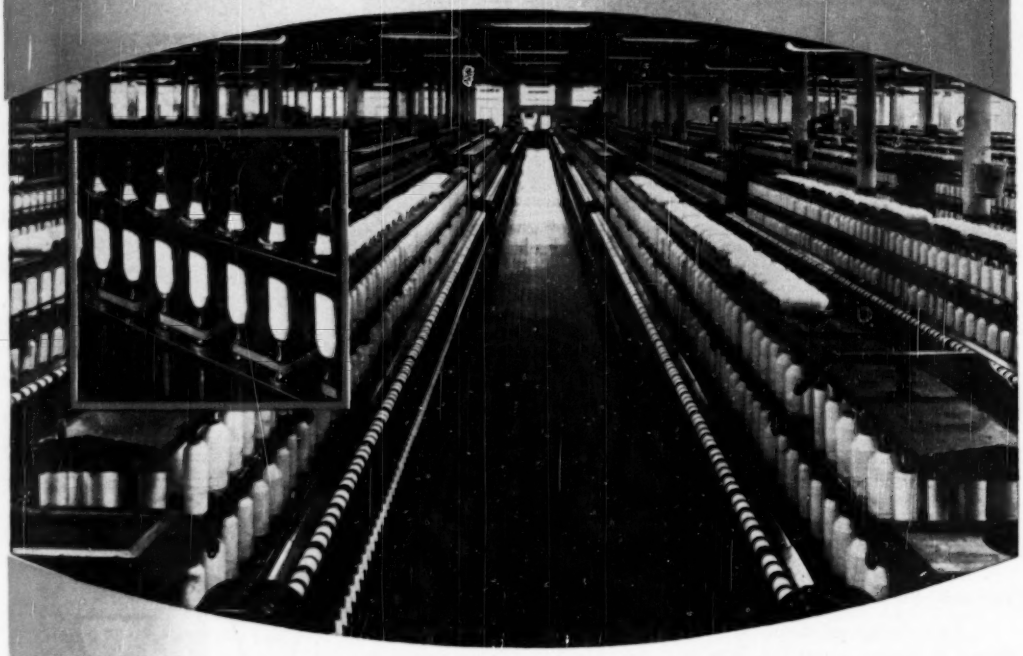
Engineering Offices and Jobber Stocks IN ALL INDUSTRIAL CENTERS of the U.S. and 71 Foreign Countries

THE GATES RUBBER COMPANY
DENVER, U.S.A.
The World's Largest Makers of V-Belts

Marquette ROLLER BEARING SPINDLES

with FULL FLOATING FOOTSTEP BEARING

FOR COTTON • RAYON • NYLON • WOOL • WORSTED



Based on the results of a test in 1944, this mill now has approximately 64,000 Marquette Roller Bearing Spindles in operation.

The mill's records prove that Marquette spinning spindles have three distinct advantages. They produce yarn of highest quality . . . they reduce power and maintenance costs . . . and as a result of fewer ends down, production is increased not only in spinning but also in weaving.

We'll be glad to prove the advantages of operating Marquette Roller Bearing Spindles in your mill. For a test installation, contact our home office or one of our representatives.

PROTECTED BY U.S. AND FOREIGN PATENTS, AND PATENTS PENDING

The Marquette METAL PRODUCTS CO.

CLEVELAND 10, OHIO

SUBSIDIARY OF CURTISS-WRIGHT CORPORATION

Representatives:

BYRD MILLER, WOODSIDE BLDG., GREENVILLE, S. C.

C. H. WHITE, 412 W. BESSEMER ST., GREENSBORO, N. C.

WILLIAM P. RUSSELL, BOX 770, ATLANTA, GEORGIA

JOHN J. GALLERY, 58 LIVINGSTON AVE., LOWELL, MASS.

Also Manufacturers of: HYDRAULIC GOVERNORS • FUEL OIL PUMPS • FUEL OIL INJECTORS
WINDSHIELD WIPERS FOR AIRCRAFT, TRUCKS AND BUSSES • PRECISION PARTS AND ASSEMBLIES

Let's Get the Facts!

THE ACCOMPANYING table gives the opinions of five executives on practices and trends within the textile industry. The men whose opinions are given were selected from within the textile industry because of their prominence in it, or from fields so closely identified with the textile industry that they follow every move it makes.

The opinions of these men were given in response to questions contained in an Industry Area Survey* made by the editors and published in this magazine from May through the November issues 1950. The purpose was to determine, prior to publication of the survey results, what executives within the industry and closely identified with the industry "thought."

The fact that in so many instances these executives were wrong is no reflection on their abilities. Other mill men who participated in the survey indicated that they, too, had no idea of the extent of the trends in, for example, such policies as retaining mill doctors, paying for hospitalization and life insurance, adoption of pension plans, supervision of recreation programs, etc.

However, all who participated in the survey were anxious to see the final results.

But if top ranking men identified with the textile industry have such little conception of their own industry's trends and policies, what must the general public think? And whether we are diehards or not, we must be interested in America's opinion of us as an industry!

THE PUBLICATION of the survey results (many of which we consider favorable to the industry) and the opinions as expressed (rightly or wrongly) by the executives, have

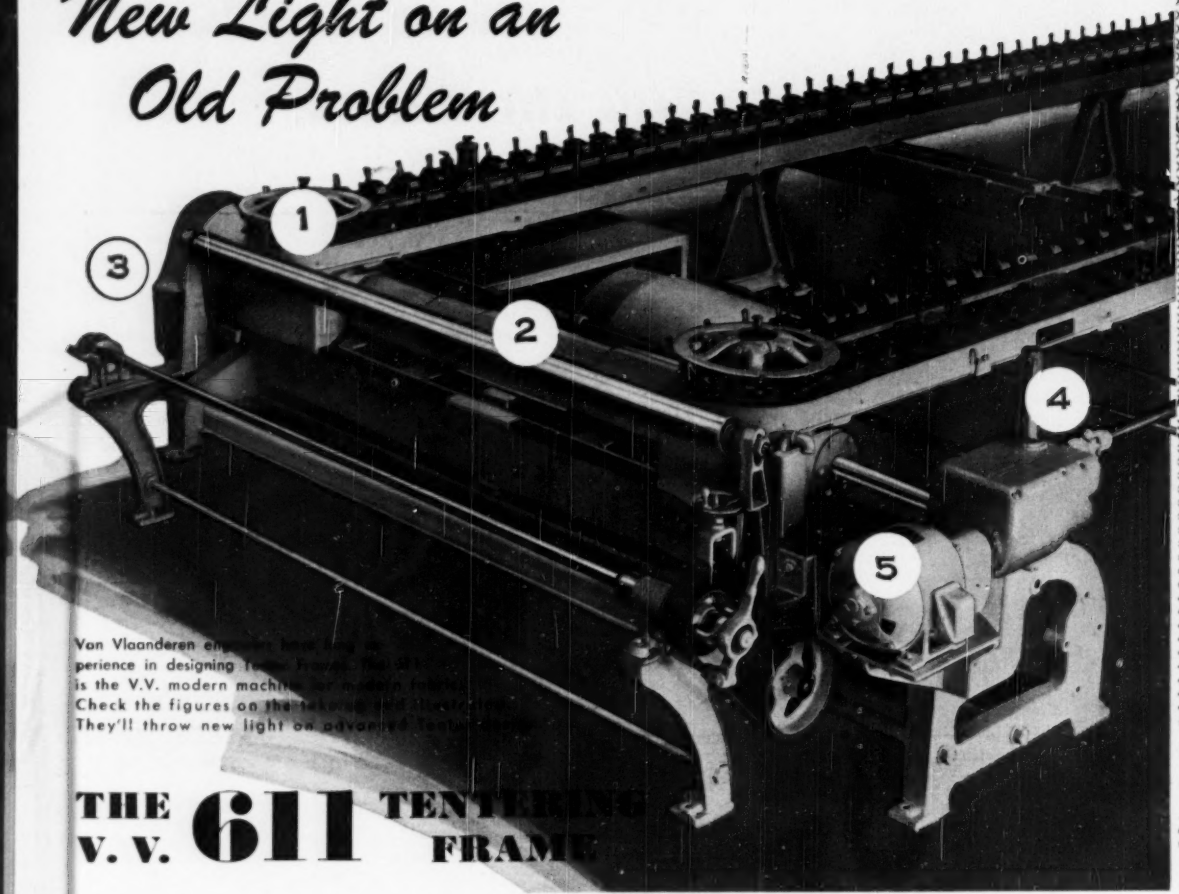
*Reprint available upon request.

OPINIONS OF EXECUTIVES CLOSELY ALLIED WITH OR IN THE TEXTILE INDUSTRY

Question (as paraphrazed from "Textile Industries' " Industry Area Survey)	Exec. No. 1	Exec. No. 2	Exec. No. 3	Exec. No. 4	Exec. No. 5
1. **What percentage of employees have available hospitalization or life insurance plans?**	Life 30%; Hosp. 45%	90%	10%	30%	3%
	The Trend*: 94% of textile employees in areas sampled come under some type of hospitalization program. Company pays total cost for 35% of employees, employee-company participate 16%, available employee pays 40%, no plan 6%. Life insurance: company pays total for 26%, employee-company participate 28%, available employee pays 14%, no plan 32%. See TI, June 1950, page 71.				
2. **How many employees receive medical service beyond first aid or that required by law?**	Is general practice	None	25%	3%	10%
	The Trend*: 56% of employees receive pre-employment physical exams. 23% of mills have industrial vision programs. Larger plants usually have full-time trained nurses. 52% of mills either pay all or share in cost of hospitalization insurance program. Many employees have access to a doctor who makes regular visits to the plant. Occasionally doctors visit employee's family at company expense. See TI, May 1950, page 71; July 1950, page 63.				
3. **How many mills have pension or retirement plans?**	All have some plan; 25% have formal plan	2%	3%	None	10%
	The Trend*: 21% of the mills, employing 25% of the operatives, have retirement or pension plans. A majority of the pension funds are financed solely by the company. See TI, August, page 71.				
4. **Give paid vacations?**	75-80%	95%	95%	90%	30%
	The Trend*: TI's industry area survey showed that all but a very few of the mills in the area sampled give paid vacations. Most mills which give vacations publicize the fact. See May, p. 71.				
5. **Have recreation facilities?**	All	82%	40%	40%	25%
	The Trend*: 75% of mills, representing 90% of employees, have recreation programs. 64% of the mills, representing 86% of employees, have supervised recreation programs. See Sept., p. 105.				
6. **How many mills have "mill doctors"?**	All	75%	25%	5%	40%
	The Trend*: 26% of the mills and 45% of employees have "mill doctors." See July, p. 63.				
7. **How many mills have employee publications?**	25%	11%	5%	8%	15%
	The Trend*: 28% of the mills have employee publications. See TI, Nov. 1950, page 71.				
8. **How many mills have held "open house"?**	15-20%	5%	5%	All	1%
	The Trend*: 41% of the mills have held open house. See TI, Nov. 1950, page 71.				

**As disclosed from "Textile Industries' " Industry Area Survey*

New Light on an Old Problem



Van Vlaanderen engineers have had long experience in designing tenter frames. The latest is the V.V. modern machine. Check the figures on the features and specifications. They'll throw new light on advanced tentering.

THE V. V. 611 TENTERING FRAME

1 Hardened steel sprocket to eliminate "whip" of chain clips. Driven by heavy duty, ball bearing mounted worm gears running in oil in enclosed gear boxes mounted on machined lathe-type bed.

2 Telescoping guard, completely enclosing drive shaft, completely protects cloth from oil splatter. Reduces reject yardage.

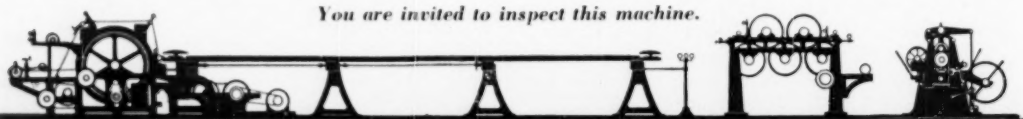
3 Swiveled square take-up bar, mounted on patented snap lock and clutch with roll tension adjustment provides easy loading and unloading.

4 Accurate width indicator shows rail spread at a glance, assuring desired tentering width.

5 Rail spreader motor, an independent power source for remote control of tentering width with or without main drive running, provides synchronized opening or closing of all rail sections.

6 This Tenter will readily fit in combination with Palmer, Quetsch and other machines to give you the range you wish.

You are invited to inspect this machine.



VAN VLAANDEREN MACHINE COMPANY

370 Straight Street • Paterson 3, New Jersey

World's largest manufacturers of machinery for processing modern fabrics

emphasized several steps to be taken which have been accepted in principle, but which have been neglected in action:

1. Our textile industry can well utilize current statistical data pertaining to operating and management policies. The existing agencies which serve the various branches of the textile industry are in position to handle within-industry statistics with the least possible expansion and cost.

2. Our textile industry and its individual units should tell their story to a wide audience—and continue to tell the story. This is one phase of public relations.

3. Our textile industry would be served well by supporting whole-heartedly a public relations program on an industry-wide basis. Such a program has been in force for several years, supported only half-heartedly by the industry. The results from even so meagerly-financed a program have been highly encouraging.

4. Individual units of our textile industry need to study within-industry statistics to determine if they are in step with the trends of the time. Though production of quality goods is our stock in trade, if a mill fails to keep abreast of modern management practices, the plant becomes an easy mark for undesirable and outside influences; and it may find itself idle with no production problems to worry about.

—J. C. F.

NEWS in BRIEF

High Finance. Examination of bids received on Quartermaster invitations creates suspicion in some quarters that the government is occasionally "being taken for a ride" in its military procurement. Among the more jolting items are the following extracted from recent QM announcements:

Paulin, Canvas, FWWMR, O. D., Small
Company A: $5.49-$5.79
Company B: $26.85-$29.85

Undershirts, Cotton, Special, White
Company A: $0.56
Company B: $1.499-$1.599

Sheet, Cotton, Bed, 63"x108"
Company A: $1.834-$1.837
Company B: $2.2918-$2.4039

The companies listed in each instance represent a typical spread of prices. In an industry where competition usually dictates figuring costs closely, receivers of bids think it is remarkable that quotations between different mills can show such an enormous range.

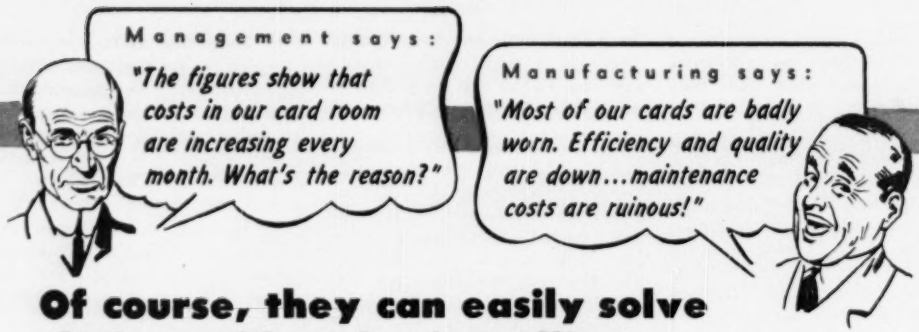
Impressed by Foreign Production Equipment. In a letter to the editors of TEXTILE INDUSTRIES, a mill superintendent has written that he is impressed by the appearance and workmanship of foreign production equipment, comparing it favorably to its American equivalent. Especially mentioned were machined surfaces to reduce accumulation of lint, and glass enclosed gearing, cited as an aid in housekeeping and protection of moving parts. Disadvantages, according to the correspondent, were inadequate supply channels and service. Price differential was cited as favorable to foreign equipment.

International Agreement on Hose Identification. Inaccurate and misleading labeling of hand-knitted and machine-made argyle socks will be reduced under an international agreement between manufacturers in the U. S., Britain, and Canada, brought about by the National Better Business Bureau. Descriptions agreed upon are (1) Made on a hand-operated knitting machine (2) made on a hand knitting machine (3) knitted on a hand-operated machine, and (4) hand machine knitted.

Continue to Clothe Services in Wool. The principle of clothing the American armed forces exclusively in 100% wool, and excluding the use of synthetic fibers in any fabrics now made of wool, will be rigidly adhered to, so long as wool is available, according to Under-Secretary of the Army Archibald Alexander. Furthermore, arrangements have been made for the purchase by CCC of a maximum of 100 million pounds of raw wool as a strategic wool reserve.

Fundamentally Sound (Cotton). Radical changes that have taken place in the cotton textile industry during the past quarter century make the industry a fundamentally sound field for investment, H. D. Ruhm, Jr., president of Bates Manufacturing Company, told members of the New York Society of Security Analysts.

New Type "Orlon". Now in experimental production by the Du Pont Co. is a new type of "Orlon" acrylic fiber that has been designated as "A-3." It is expected that this new fiber can be used in the manufacture of such garments as bathing suits, sports shirts, rainwear, etc., because of its affinity


Management says:
"The figures show that costs in our card room are increasing every month. What's the reason?"
Manufacturing says:
"Most of our cards are badly worn. Efficiency and quality are down... maintenance costs are ruinous!"

Of course, they can easily solve their problem by installing . . .

WHITIN MODEL "L" CARDS

When badly worn cards result in lower production, inferior quality and excessive maintenance costs, both Management and Manufacturing must recognize the necessity for replacing the old machinery with modern, efficient equipment . . . or face the certainty of continuing and increasing financial loss.

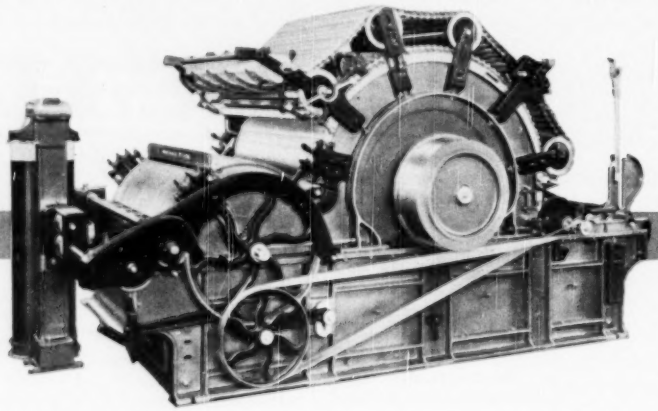
In mill after mill, where comparable conditions existed, installations of Whitin Model "L" Cards have turned the tide — have put the Card Room on a profitable operating basis.

A development of particular interest is the new *steel top flats* which are now standard equipment on the Model "L". Everywhere mill men are reporting enthusiastically on their performance — their greater rigidity, closer and better holding of settings, reduction in variation and more uniform sliver.

In addition there are many other features, resulting in more profitable, all-around operation, including:

- **Strengthened framework, cylinder bearings and arches contributing to easier maintenance of card settings.**
- **Oilite bearings in many locations insuring quieter operation.**
- **Restyled surfaces and contours facilitating cleaning and adjusting.**

Don't take our word for it. Why not visit a nearby mill where Model "L" Cards are operating, then send for your Whitin representative?



Write today for our illustrated folder giving complete details and technical data.

Whitin MACHINE WORKS

WHITINSVILLE, MASSACHUSETTS

CHARLOTTE, N. C. • ATLANTA, GA. • SPARTANBURG, S. C. • DEXTER, ME.

for dyes. Indications are that a complete range of colors can be imparted to the fiber.

Demand for 30 Denier Hose Increasing. Recent reports indicate that sales of 30 denier hosiery have increased to a point beyond manufacturers' and retailers' expectations with the result that this weight stocking is in short supply.

Step Toward Buying on Fiber Quality. A step in the direction of buying cotton on fiber qualities instead of on grade and staple may be for the mills to advise the shipper of specifications the mill desires in fiber qualities, according to an opinion in the industry. Heretofore mills have not divulged to the shippers the fiber specifications needed, and shippers could not be expected to furnish the proper stock if mills consider their fiber qualities a secret—not to be mentioned outside the laboratory.

1951 Swim-for-Health Week. The 16th annual National Swim-for-Health Week has been scheduled for June 25-30, 1951. Activities of the swimwear promotion campaign will be expanded, it is reported, since the budget is 50% greater than last year's. The amount of promotional material to be sent to the retail stores will be increased. Also, 5,000 additional department stores will be asked to cooperate in the program.

Wool Shrinkage Not Related to Origin. Laundry shrinkage of wool garments, according to Quartermaster Corps researchers, has no relation to geographical origin or grade of fiber. Complete report available from Office of Technical Services, Dept. of Commerce, Washington, D. C., "Some Felting Properties of Wool;" fifty cents.

Covers for Drums. Barrel and drum covers made of neoprene-impregnated paper are designed to handle material in process or to guard contents against unwanted particles. Manufacturer, Chase Bag Company.

Best Feeds in Cotton Bags. A recent survey among farmers on print cotton feed bags showed, among other things, that 83% of those answering the survey were under the impression that the best feeds come in quality cotton bags. 44% said they had switched dealers at one time or another to obtain more attractive prints.

Knitting Mills Backwind Yarns. Most knitted outerwear manufacturers backwind some or all of their yarns to assure smooth performance on the knitting machines, according to a survey conducted by the National Knitted Outerwear Association. Only 12% of the firms participating in the survey say they do not backwind.

1954 Date of Next Textile Machinery Exhibition. Information has been received from the National Association of Textile Machinery Manufacturers that the second American Textile Machinery Exhibition will be held in Atlantic City, N. J., during the period April 26 to May 1, 1954.

Not in 70 Years. Claiming "there hasn't been a really new design in carpets for the past 70 years," L. A. Fleischman of Arthur Fleisch-

SCOTCH PLAID WRAPPED COTTON FOR A PRINCESS

Citizens of Edinburg, Texas, believing that a princess should have nothing but the best, recently shipped a bale of Rio Grande Valley cotton to the new daughter of Princess Elizabeth and the Duke of Edinburgh.

The cotton, with a staple of 1¼ inches (the longest ever ginned in the valley), was wrapped in the Rose Stuart red plaid of the Duke of Edinburgh clan.

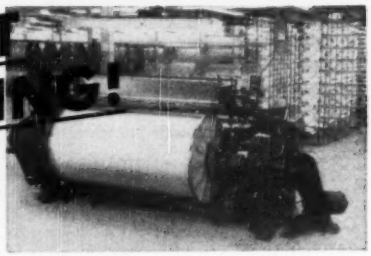
The princess won't have to wait to be "outfitted as befits a queen — in frocks of the world's best cotton," since such long fiber cotton is highly absorbent and especially suitable for making diapers.

It's a PRODUCTION FACT

with the high-speed —HEADLESS PACKAGE— U.S. ACME FACE DRIVE —TWISTER—

★ INCREASE PRODUCTION!
★ IMPROVE QUALITY!
★ ELIMINATE REDRAWING!
★ PRODUCE 1-lb. to 1½-lb. KNOTLESS PACKAGES!

DIRECT to AUTOMATIC QUILLING or HIGH SPEED WARPING WITHOUT REDRAWING!



PRODUCTION HIGHLIGHTS

★ Twist without flyer up to 15,000 R. P. M. with balanced bobbins!
★ Combination yarns, voiles, acetates and nylon up to 35 turns per inch!
★ 178,096 spindles now in production!

Yes, it's a fact—yarn twisted on the U. S. Acme Face Drive Twister goes DIRECT to the quilling or high speed warping operation without redrawing! It's a time and cost saver, a production booster that turns out top quality knotless packages from 1-lb. to 1½-lb. WRITE FOR COMPLETE INFORMATION . . .

U. S. TEXTILE MACHINE CO.
700 GILLIGAN ST.
SCRANTON 8, PENNA.

man Company has set aside $2000 for prizes in the First Annual National Carpet Design Competition.

No Souvenirs. Management of the Institute of Radio Engineers Show has served notice that exhibitors will not be permitted to give away any kind of souvenir, even a picture postal card. Bulletins descriptive of goods are acceptable. Artists who sketch persons and photographers who make pictures of those visiting booths are forbidden—anything which causes the crowd to gather and block aisles is taboo.

To Test Anti-Mildew Treatment for Cotton. Extensive tests to discover better ways of protecting cotton fabrics from rot and mildew will be made cooperatively during the next few years in various parts of the world by the QM and USDA. Results obtained will guide the QM in developing new cotton fabrics. Southern Regional Research Laboratory, New Orleans, will cooperate in the program.

Bamford in Charge TWUA for South. James W. Bamford has been named by Emil Rieve to be in charge of the southern area of TWUA. Headquarters are in Atlanta.

Textron Plan. A new plan whereby selected manufacturers of apparel and other textile products may be authorized to use the Textron brand name on certain lines which they manufacture under a mutual production and quality control agreement, is in effect.

New AATCC Student Chapter. A student chapter of the American Association of Textile Chemists and Colorists has been organized at Fairleigh Dickinson College, Rutherford, N. J.

Carpet Industry Expands Lines of "Chemifibres." During 1951 carpet manufacturers will present expanded lines which use man-made fibers, said to improve the product and offer a carpet or rug at lower prices. Various synthetic fibers will be used, but the carpet industry will refer to them collectively as "Chemifibres."

Cut Waste. Describing industrial waste as an annual multi-billion dollar problem, T. G. Graham, vice-president of Goodrich, said that waste must be cut to the bone if the U. S. is to become as strong as it should be.

AATCC Plans for 1951 Convention. The 30th National Convention of the American Association of Textile Chemists and Colorists will be held at Hotel Statler, New York, October 17-19, 1951. Featured at the convention will be the largest exhibition of dyestuffs, materials, and process equipment that the organization has ever sponsored. Special registration will be available to non-members engaged in textile dyeing and finishing, allied trades, and to students.

Extra Pay on Entering Armed Services. Employees of Westinghouse who have been with the firm for more than one year receive a month's extra pay if they enter the armed services while active conflict continues.

Bales Astray. The New England Cotton Freight Bureau has filed a report showing that the number of bales going astray has not been appreciably reduced under all-rail shipments as compared with rail-and-water routing in former years. The number of astray bales, percentagewise, remains an important factor in the supply of cotton to the mills.

Employees Cannot Work on Own Terms (NLRB). Employees who engage in concerted "slow-downs" do so at their own risk and perhaps without protection of the Labor-Management Relations Act, says NLRB. The board held, "either an unlawful objective or the adopting of improper means of achieving it may deprive employees engaged in concerted activities of the protection of the act."

Benjamin Russell High School. A million-dollar high school building recently dedicated in Alexander City, Ala., was named after the late Benjamin Russell, prom-

SHIPPING COST CUT BY USING PORT OF CHARLESTON

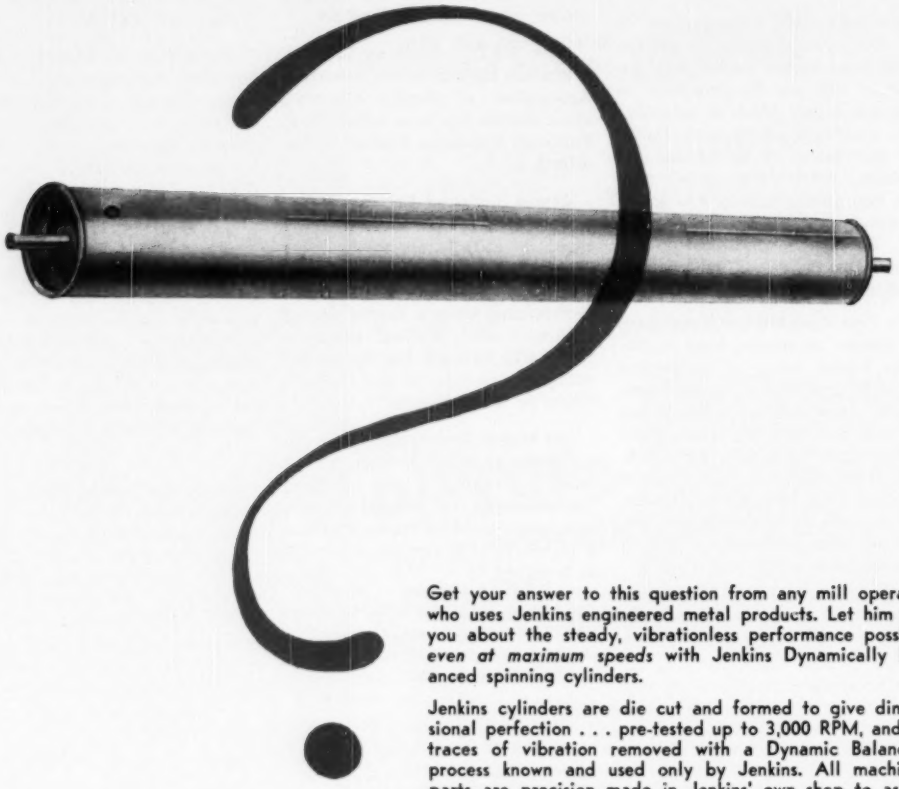
Shipping costs of textiles sent to foreign or even distant domestic markets can amount to a considerable part of the total price per yard. Prior to 1947, the great majority of the textiles shipped out of the Piedmont Carolina region for export, went through the port of New York. This was not by choice, but by necessity, for there were no port facilities in use or any scheduled sailings from Charleston.

The Port of Charleston has now been in commercial operation for three years; it handled 144,373 tons of shipping in the first five months of 1950. Not only is the port handling exports of finished textile products, but 83% of all Egyptian and Peruvian cotton imported in 1949 and 1950 has come in through this port.

The full-scale operation of the port has made possible big savings for the textile mills in the Piedmont Carolina area. For example, the present rail rate on textiles out of Rock Hill, S. C., a representative point of origin, to New York City, is $1.52 per 100 lb. The rate to Charleston is 55 cents per 100 lb.

Making use of the nearby port facilities, Rock Hill Printing and Finishing Co. shipped 765 tons of finished textiles through the Port of Charleston in the first 7 months of 1950, and thereby saved their customers $14,840 in plant-to-port shipping costs when compared with their previous practice of shipping through New York.

HOW SMOOTH CAN A CYLINDER RUN



Get your answer to this question from any mill operator who uses Jenkins engineered metal products. Let him tell you about the steady, vibrationless performance possible *even at maximum speeds* with Jenkins Dynamically Balanced spinning cylinders.

Jenkins cylinders are die cut and formed to give dimensional perfection . . . pre-tested up to 3,000 RPM, and all traces of vibration removed with a Dynamic Balancing process known and used only by Jenkins. All machined parts are precision made in Jenkins' own shop to assure absolute uniformity.

The result: yarn flows freely and smoothly at all speeds. Excessive wear on spindles, bolsters, gears, bearings, and journals is eliminated. You increase production, cut costs, and improve quality.

Unless you're *sure* you are getting the smoothest possible performance on every spinning frame, write us for full information.

JENKIN'S *Dynamically Balanced* SPINNING CYLINDERS

JENKINS
ENGINEERED PRODUCTS

JENKINS METAL SHOPS • GASTONIA • NORTH CAROLINA

inent Alabama textile mill executive and philanthropist. Paid for entirely by gifts from the Benjamin and Roberta Russell Foundation, Avondale Mills, and local citizens and business establishments, the building has been described as "one of the show places of Alabama." Thomas D. Russell, president of Russell Mfg. Co., and son of the founder, presented the keys and deeds of the school to the city's mayor for public education.

Bobbins From Cotton. Putting the cart before the horse, Hercules Powder Company technicians are predicting bobbins from cotton. The ethyl cellulose which this chemical concern manufactures is derived from cotton linters. As a plastic, ethyl cellulose will soon make its debut in the cotton industry in the form of a light weight filling bobbin. Representing simplicity and perfection in fabrication, the plastic bobbins will be injection molded to yield maximum uniformity of weight and balance. Among other virtues claimed are durability, chip and scuff proof hardness, and low cost. The plastic comes in a full range of colors for identification of yarn styles. A large southern mill is currently evaluating performance.

Radioactive Iodine. Add to the growing list of radioactive tracers employed in the textile field, radioactive iodine. It is being used to quantitatively determine the amount of detergent remaining on fabric after scouring. The technique may lead to economies in many washing operations.

Undersubscribed Bidding Disturbs Military. Textile mills are undersubscribing government bids on many critical military items. Some have been taking advantage of the situation by submitting bids considerably above market levels. Manufacturers desirous of cooperating in the emergency are submitting bids at normal quotations but in this way are sacrificing part of their civilian market to less patriotic producers.

Net probable effect will be freezing of wages and prices in the textile industry, and allocations by the National Production Authority. Some textile men apologetically explain their situation by calling attention to rising prices of raw materials, which makes it risky to build large inventories in anticipation of a government contract, considering the long period between date bid is submitted and announcement of award. However, such hesitation will result in just that situation many industrialists hope to avoid —government curbs.

COLORFUL POLYETHYLENE BAGS

Colorful brand-printing on tough, transparent polyethylene film bags is making its debut as a sales-appealing, protective retail counter package for all types of garments ranging from juvenile clothing to lingerie, from sport shirts to dress gloves, says Bemis Bro. Bag Co., one of the first concerns to offer multicolor printing on bags and covers made from this plastic film.

Advantages claimed include: saving on container costs, and tissue wrapping is eliminated, giving savings on both cost of material and labor involved in tissue wrapping. Nearly twice as many garments can be packed in a shipping size container, thus saving on shipping carton costs and freight.

Watch Premium Pay on Government Contracts. An analysis by the National Association of Manufacturers on Joint Procurement Regulations points out that employers engaged in defense production presumably should avoid work schedules which require the payment of premium compensation. JPR provide that production plans and schedules will be predicated upon industry normal work-weeks and shifts without recourse to overtime. Approval for premium pay may be secured under certain conditions.

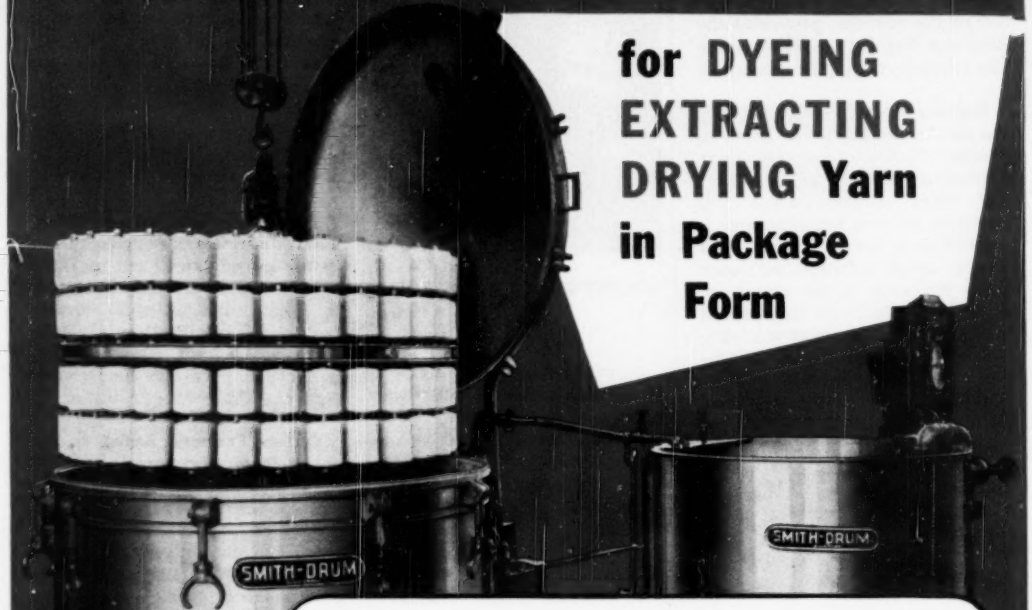
Clarify Government Specifications (Underwear). Representatives of the armed forces and the knitted underwear industry have met to clarify difficulties in current underwear specifications. Full information concerning any changes in specifications may be secured from the Underwear Institute.

Cotton Farmers Asked to Increase Crop. Farmers throughout the cotton belt will be called on to increase the cotton acreage by 50% over 1950 plantings to meet demand and guarantee a reasonable carryover. With surplus cotton a few months back, the sudden change is puzzling to many farmers. They must be assured of adequate labor to produce such a crop, possibly needing assistance of Mexican personnel.

Fiberglas Bibliography. Owens-Corning Fiberglas Corporation has published the third edition of Fiberglas Bibliography, a volume of annotated references to selected articles which have appeared in the nation's press.

Aluminum for Research. While military requirements have first priority on aluminum production, and according to reports there is plenty of aluminum for any announced military program, Aluminum Company of America has set forth: "We will cooperate with any manufacturer who has a long-term development problem in aluminum that requires no immediate tonnage of metal. We will help you make the most of the aluminum available."

There's a SMITH–DRUM System to Meet Every Operating Problem . . .



for DYEING EXTRACTING DRYING Yarn in Package Form

TWO INTEGRATED SYSTEMS

① Package Dyeing Machine (illustrated)
Mechanical Extracting Machine
Cabinet Type Drying Machine

★

② Package Dyeing Machine (illustrated)
Pressure Extracting Machine
Port Type Drying Machine

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Faster, Better, at Lower Cost

Your requirements for package dyeing, extracting and drying are determined by your location, the capacity you wish to establish, the type of colors (direct, vats, developed, naphthol, acid, etc.) you are going to use, the cost of water, steam and electric power.

That is why you should consult Smith-Drum regarding your plans. Qualified engineers, each with a background of textile training and practical experience, will show you what advantages you can obtain from using the proper selection of Smith-Drum package dyeing, extracting and drying machines to meet your own requirements.

The proper selection of "The Best Machine" of each type will insure your getting the best results, in the shortest time at the lowest cost.

Write for Catalog No. PBD-801 and have our engineer call.

SMITH, DRUM & COMPANY

ALLEGHENY AVENUE AT 5th STREET, PHILADELPHIA 33, PA.

AN

EXECUTIVE VIEWS

THE NEWS IN TEXTILES

Prepared by a man who is closely identified with the textile industry.

The Lawyers are Happy

THERE MUST be great joy in the camp of the Washington lawyers these days, because once again we are burdened with incomprehensible regulations and controls. To those of us who went through the confusing years of OPA and CPA, the whole situation is somewhat discouraging because we know that once controls are foisted upon a free people, it is always necessary to devote quite a bit of time and effort to their removal after the "emergency" is over.

Yet, while there is wailing and gnashing of teeth throughout industry, the lawyers must indeed be exalting. The time is not far away when every vice-president will have to be flanked by a lawyer and when every president will have to employ a law firm to keep himself out of jail and several law firms to save his company from federal penalties and resulting bankruptcy. Our business language has become so sprinkled with *whereas, nol-pros and nolo contendere* that no ordinary businessman can hope to find his way through the maze of regulations.

NPA Regulations (Amended)

(Amended) (Amended) (Amended) (Amended)

While speaking of regulations, it might be well to caution you that NPA (to the uninitiated these initials stand for National Production Authority) has already promulgated several regulations. Within a week of the issuance of NPA Regulation 2, we had an amendment to the regulation, and all of us long ago learned that you cannot enjoy the game unless you have copies of all the regulations and amendments thereto.

We would like to tell you what these regulations mean, and we would like to be able to explain to you what you should do when you are confused with a "D.O." order, or when you want to use such an order of your own. For the time being, however, this writer must stand in the ranks of the ignorant. We asked our lawyer to explain it to us, but he had gone to his lawyer for an explanation.

Seriously, however, the country is going deeper and deeper into a controlled economy, and apparently there is little or no help for it. As each new control is imposed, the particular section of the population which is adversely affected by it immediately objects, and some of the rather fantastic claims are in reality jeopardizing industry's position. For example, when the credit restrictions were imposed several weeks ago, one spokesman claimed that this was the most drastic order ever imposed upon a free people. After seeing some of the orders which have come out of Washington for the last ten or fifteen years, we feel that this spokesman's statement went rather far.

Manpower Situation

Still another phase of the national picture which is adding to the confusion is the lack thus far of a concise and clearly stated military policy with regard to manpower. Some employers, it is alleged, have refused to hire members of the National Guard and of reserve components, and it has been said that some have even gone so far as to discharge reservists and guardsmen.

It is quite true that an employer who would take such action is neither patriotic nor fair, but at the same time, it must be admitted that a clearly defined man-power policy would go a long way toward alleviating confusion and considerable personal inconvenience.

As this is being written, it appears that the Department of Defense may be able to set up a concrete plan whereby employer and employee could estimate with reasonable accuracy the length of time preceding a recall to military service, and if such a plan can be prepared and closely defined, considerable value will result.

New England Meeting

Recalls to military duty seemed far from the minds of the New England textile men who several

LEGISLATION IN ASSOCIATIONS (AN ANSWER)

EDITOR TEXTILE INDUSTRIES:

Beginning on the bottom of page 89 of your October 1950 issue is a letter expressing criticism of textile associations for their failure to initiate and to talk about legislation which they are sponsoring or which the writer of that letter feels that they should sponsor.

I think I can answer that letter constructively.

It is a fact that very few trade associations ever sponsor any positive legislation, either local or national, though as the writer of that letter points out, they do engage very extensively in opposing legislation proposed by labor unions and other groups. There is a good reason for this negative policy on the part of trade associations and business organizations, and I will try to explain it briefly as I can.

In the first place, labor unions, in order to maintain the support of their members and to keep the dues money flowing in, must always be demanding more and more than that which their members have. They cannot afford to let the status quo exist very long, because then their members begin to say, "But you

(*Continued on page* 180)

A Good Line to Know...

THE HOUGHTON LINE OF SURFACE ACTIVE AGENTS

It's not necessary to sell textile mill men on the need for using surface active agents these days. But it is difficult to select the one out of some 700 on the market which will do the best job of detergency or wetting for a specific application.

They want an agent which represents a good money value. The concentrated types may cost more, but you use less, so there's no saving if you try to buy on price alone.

The textile chemist today knows the general classifications, their origin and characteristics. So he is inclined to buy on reputation and experience of the supplier, prompt delivery, money value and the service rendered to help solve particular problems. We certainly qualify on those points—but that is by no means the whole story.

Houghton has been making detergents and wetting agents for over fifteen years. As a result of a long-range research program started in pre-war days, we now offer surface active agents definitely different and more efficient than the general types commonly available.

To help you differentiate between them, we've made up the table below. It can't tell the whole story in so few words, but it shows how well we cover the field. For further data, you are invited to write E. F. Houghton & Co., 303 W. Lehigh Ave., Philadelphia 33, Pa.

PRODUCT	CHEMICAL CLASSIFICATION	PROPERTIES AND USES
CERFAK	Alkyl aromatic sulfonate Anionic—(Flake Type)	Used over full pH range for detergency and/or wetting. Also for compounding cleaning agents.
CERFAK 1300	Polyoxyethylenealkyl thioether—non-ionic (Liquid)	Combined detergent and wetting agent, effective over full pH and temperature range at low concentrations. Okay in hard or soft water. Fine for raw wool scouring and cotton piece goods.
CERFAK 1301	Blend of selected non-ionic agents (Liquid)	Excellent for scouring and dyeing woolen and worsted yarns and piece goods. Generally applicable as a detergent.
CERFAK N-100	Amine condensate (Liquid)	Combined detergency and wetting action. Use with low per cent of alkali. Good for all types of alkaline scouring. Excellent dye bath leveler.
CERFAK 453	Blend of selected anionic and non-ionic agents (Liquid)	Moderately priced surface active agent. Stable in bleach baths. Will not affect enzymes used in desizing. Non-staining. Wide pH effectiveness. Rapid wetting speed, excellent rewetting ability, good scouring ability. Specially adapted for fabrics to be "Sanforized".
SURFAX 1288	Alkylaroyl sulfopropionic ester (Liquid)	Concentrated wetting and rewetting agent. Used in neutral or mildly alkaline solutions. An exclusive Houghton research development.
SURFAX W. O.	Sulfated fatty ester (Liquid)	Combined penetrant, softener, wetting and rewetting agent. Recognized in textile industry as a standard of comparison.

HOUGHTON'S CERFAK and SURFAX

DETERGENTS **WETTING AGENTS**

weeks ago celebrated the 96th annual meeting of the National Association of Cotton Manufacturers. The sessions were held at the picturesque New Ocean House at Swampscott, Massachusetts, and extracurricular activities included golfing, fishing, sailing, and one or two other sports. It was a time of relaxation, and the site was peculiarly inducive to rest. At the same time, however, a considerable amount of serious thought was given to the future of the New England textile industry.

At this meeting announcement was made of the retirement of Russell T. Fisher, who for many years had served as president of the organization. For a number of months there had been no secret that Mr. Fisher's health might not permit him to continue his work, and his absence from the Swampscott meeting was remarked upon by practically every textile man present, and manufacturers and guests spoke of his work in the highest terms.

Of one thing the entire industry can be certain, and that is that Russell Fisher worked every day in the month and every month in the year for the New England textile industry. He was a convincing spokesman in Washington, a valiant promoter and defender of his industry in that great region, and he was progressive and persistent in every project he undertook.

The New England textile industry can be proud of Russell Fisher and the work he has done, and from Maine to Georiga manufacturers will join in wishing for him an improvement in his health.

The announcement that William F. Sullivan will succeed Mr. Fisher as president met with the approval of the group, many of whom had had many contacts with Mr. Sullivan in his capacity as a member of the law firm which represented the Association. Bill Sullivan impressed his listeners at Swampscott as a young man of character and integrity and one who would make a worthy successor to Russell Fisher.

North-South Unity

The Swampscott meeting also marked another milestone. A group of manufacturers and trade association representatives, spokesmen for the American Cotton Manufacturers Institute, were on hand to extend greetings and best wishes to the New England group, and it was evident that they were received with friendliness and cordiality. For many years it has been the dream of some of the industry's leaders that one day the northern mills and the southern mills could work together in harmony. It appeared at Swampscott that that day had at last arrived.

George P. Swift of Columbus, Georgia, president of the Institute, and Robert C. Jackson, executive vice-president, impressed the meeting with their sincerity and the good sense of their remarks. As the Swampscott sessions were concluded, it appeared that Gettysburg and Chickamauga had been forgotten.

1951

Jan. 15-18—2nd **Plant Maintenance Show and Conference,** Auditorium, Cleveland, Ohio.

Jan. 22-24 — Annual meeting, **National Cotton Council,** Hotel Buena Vista, Biloxi, Miss.

Jan. 22-26—10th **International Heating and Ventilating Exposition** (also known as the Air Conditioning Exposition), Commercial Museum, Philadelphia, Pa.

Mar. 29-31—2nd annual meeting, **American Cotton Manufacturers Institute, Inc.,** Greenbrier Hotel, White Sulphur Springs, West Virginia.

April 23-27—Second biennial **Wet Processing Exposition,** 71st Regiment Armory, New York, N. Y.

April 28-May 5—**National Cotton Week.**

April 28-May 20—**International Textile Exhibition,** Parc des Expositions, Lille (Nord), France.

April 30—47th annual meeting, **National Association of Hosiery Manufacturers,** Claridge Hotel, Atlantic City, N. J.

April 30-May 1—14th **Hosiery Industry Conference,** Claridge Hotel, Atlantic City, N. J.

April 30-May 4—**Knitting Arts Exhibition,** Atlantic City (N. J.) Auditorium.

April 30-May 4—**National Materials Handling Exposition,** International Amphitheater, Chicago, Ill.

Oct. 17-19—Annual convention, **American Association of Textile Chemists and Colorists,** Hotel Statler, New York, N. Y.

Government Garment Plant

Manufacturers who attended the annual meeting of the Quartermaster Association at Philadelphia recently and who had never before observed the operations of the Philadelphia Quartermaster Depot were amazed at the spectacle which met their eyes. Guides led them through several miles of corridors which demonstrated clearly the magnitude of the tasks being performed. They saw the vast warehouse installations and the research and development activities, and many other sights.

To most of the textile men, however, the most impressive phase of the tour was the garment plant which the Army operates in thousands of square feet of floor space. Here were being fabricated overcoats, field jackets, (the Army calls them "Jacket, field, M-1943"), and many other items whose nomenclature was equally confusing. Row after row of sewing machines were busily engaged, and it was amazing to see the speed with which most operations were performed. This is a spectacle which every manufacturer of yarn and cloth should see because it is a visible demonstration of what happens to the goods you produce for the military services.

Several times in this column we have mentioned the dispute, or at least the discussion, which has buzzed about the use of cotton and synthetics in the manufacture of flags. At Philadelphia there was an opportunity to see the enormous amount of hand work which must go into the making of flags, such as regimental colors. Manufacturers who were present also saw work in progress on the United Nations flag and saw something of the large inventory maintained of the Stars and Stripes.

All told, a few hours spent at the Philadelphia Quartermaster Depot is well worth while.

TEXTILE BANKING COMPANY

Inc.

Factoring Service

Puts your sales on a cash basis
Strengthens your cash position
Relieves you of credit losses

55 MADISON AVENUE • NEW YORK

Merry Christmas to You and Yours

LONG-TIME readers of this page, "Shorts and Remnants," and those who have suffered through it only in recent months, recognize it for what it is, we hope—

—A page where we tease our friends, kid ourselves, brag on our advertisers, publish your rebukes, and accept an occasional pat on the back.

When we're feeling low, preparing S&R gives us a lift; that's because it brings us in touch with you again—the letters you write, the things you say—

And on this occasion, as the Yuletide Season approaches, we take especial joy in writing S&R, because from all of us to all of you, we wish:

——A VERY MERRY CHRISTMAS——

Looking for Client

A mailing piece from the advertising agency of Erwin, Wasey & Co., Inc., gives the following history of its success with the Springs account:

"When The Springs Cotton Mills brought their problem to us, back in 1947, they were barely able to sell two per cent (2%) of their output under their own brand label.

"Now the entire production of The Springs Cotton Mills is completely sold out for the coming six-month period. Thus it is necessary to curtail this company's amazingly successful advertising program.

"We, therefore, are looking for a client who appreciates good advertising—the kind that will create, for his product, a similar problem of overwhelming consumer demand."

► Just another parallel case. Advertisers in TEXTILE INDUSTRIES have had the same experience. You know, even we're beginning to believe in advertising.

More on "If History"

". . . appreciate it if you would send us the reprint of 'If History Repeats' . . ."—Hearst Magazines, Inc.

". . . be grateful if you would send me a copy . . . would find it most useful and helpful."—"Casket and Sunnyside" Magazine.

Wear Hardness

The outstanding wear hardness in Textile Spring-Beard Needles is the result of superior tempering, a special steel formula, and rigid, scientific controls—automatic and electronic. Each Textile Needle has the proper combination of hardness and resiliency required during knitting operations.

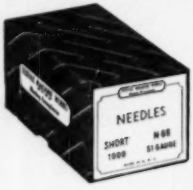
Wear hardness is only one of the many advantages you get from precision-made Textile Spring-Beard Needles. You get better performance, more even stitches and better profits.

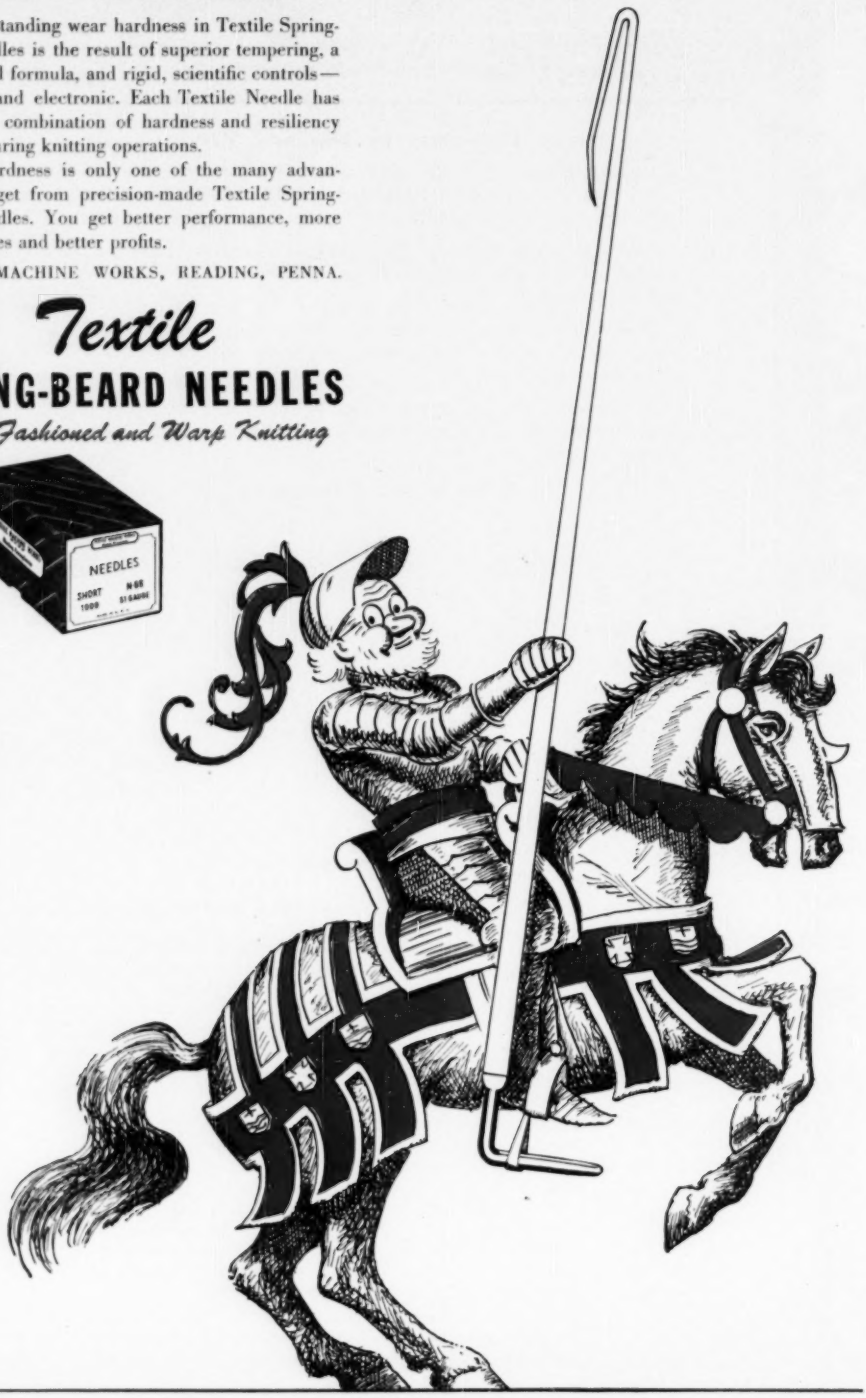
TEXTILE MACHINE WORKS, READING, PENNA.

Textile

SPRING-BEARD NEEDLES

For Full Fashioned and Warp Knitting





Textile Industries
December, 1950

Splicing Plied Yarns

Two methods for splicing plied yarns are given—one device can be made in the mill machine shop.

EXCLUSIVE

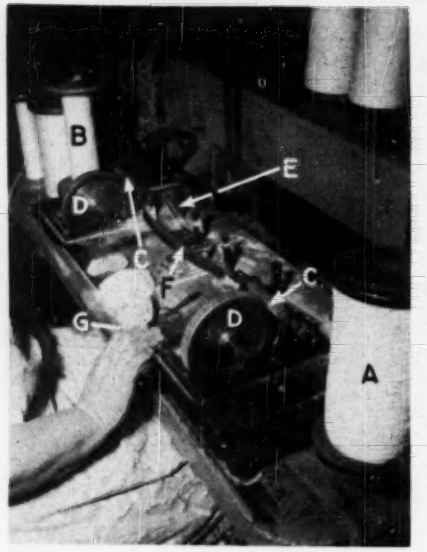
By HORACE L. PRATT
Director of Laboratory
Columbia (S. C.) Mills of the
Mt. Vernon-Woodberry Mills, Inc.

MILLS manufacturing heavy plied yarns for industrial fabrics usually have to make these yarns in definite yardages. These lengths vary with the length requirements of the fabrics being woven, and the twisters on which the yarns are plied are equipped with yardage counters, some of which automatically stop the frames when the desired length has been twisted.

Under ideal conditions all bobbins in each set would be of the same length, but many factors are involved which prevent the achievement of these ideal conditions. Ends will break, and in this type of work it is customary to take out a bobbin on each side of the bobbin with the broken end. This prevents fuzzy yarn, but when the ends taken out are put back in production on empty bobbins, this means that there will be at least six short bobbins as the result of a single break.

An incorrectly set knock-off counter will result in odd length bobbins, and a counter that is out of order may give similar trouble.

Whatever the cause of odd length bobbins, something must be done to get back to standard length before weaving begins. Short lengths are sometimes beamed on the outside and marked so that the tender will know they are short. Then when the ends have nearly run out, the tender creels them out at a cut mark. Even so, much



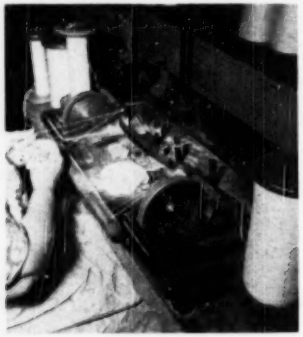
Operation of Plied Yarn Splicer

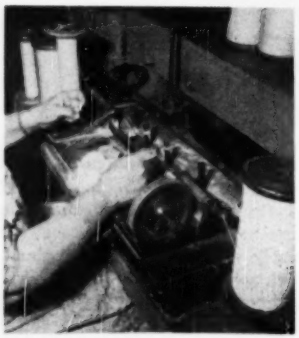
(For Use with Yarns of 5 Plies and Over)

Principal parts of splicing machine are: **A** and **B**, the two spools of yarn to be spliced, both resting on pins. **C**, the revolving thread holders, one for each end of yarn. **D**, the two handwheels which are geared to the revolving thread holders. **E**, the two post clamps. **F**, the tension bar. **G**, the spring holders.

STEP 1. An end of plied yarn is taken from each spool, passed through the revolving thread holders and crossed over and held in the post clamp on the opposite side of the machine. While so held, the handwheels are revolved so as to unwind the plies in each of the yarns.

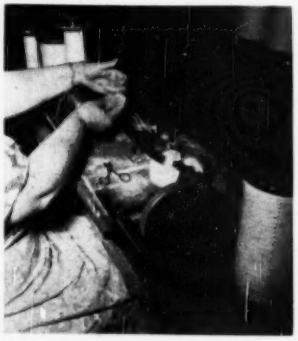
STEP 2. Unwound plies are then removed from the post clamps and the plies are separated as shown, two or three single ends being put in each group and placed in the spring holder. When so separated it is easy to handle one group at a time.





STEP 3. One group is then taken from the spring holder on each side, and the two are twisted together for a length of 3-5 inches, depending upon the number of groups to be spliced together. When twisted, the yarns are permitted to rest against tension bar.

STEP 4. Each set of plies is handled as in Step 3 until the splice is completed. The handwheels are then rotated in the *opposite* direction to that in Step 1, to reinsert the twist, making a true splice. The loose ends are trimmed with scissors. The splice is waxed thoroughly and removed from the machine



good yarn may be left on the bobbins.

These short lengths of yarn should be used, and no mill could afford to have them all go into waste. Comparatively fine yarns—perhaps as heavy as 4-ply—can be pieced together with weaver's knots, but such a knot is too large for successful weaving if the yarn is much heavier. It is customary to take these odd pieces of heavy yarn and splice them to make a good, smooth joint.

Splicing Machines. The accompanying illustrations show two types of splicing machines in operation. In the first photograph of each series of pictures, the parts are numbered and identified.

The machine shown on this page is used in a number of tire cord and heavy industrial fabric mills; the machines are no longer on the market, and the former manufacturer has no plans for making them again. Demand for them is small, but they do an excellent job; and where they are needed, they are needed very much.

Such a machine could be built in a mill shop or by an outside contractor, and if a splicing machine is needed in the mill, the design is a good one.

Using this machine, illustrated on this page, the yarn from one short bobbin is spliced with the yarn from another short bobbin and the yarn from one is run off onto the other. By continuing this process, a number of short pieces can be joined to make one full length bobbin.

The machine makes a true splice, no knots are tied, and it is not easy to tell where the splice

was made when the job is done well.

False-Splicing Machine. The second series of photographs herewith shows another machine used for joining plied yarns. It is not a true splicer because knots are tied in the plies, but it makes a neat joint, and one that is quite satisfactory for yarn of six plies or less.

This machine can be easily made in the shop, the only part that is at all complicated being the knotting post, which in this design consists of a split metal post held together by a spring.

When the first half of a square knot has been tied, the yarn is inserted between the two halves and is held there while the second half of the knot is tied. Any kind of a clamp that would hold the knot while the second half is tied would be satisfactory.

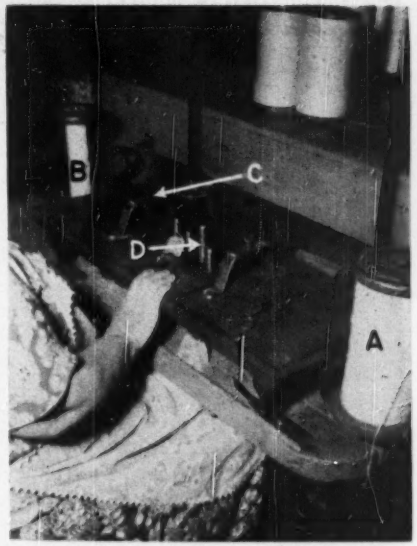
Though it is obvious that this method does not accomplish a true splice, it is far better than tying the yarn as a whole. The knots made in the separated plies are small and neat, and they are made at several points along the length of the joint. On the lighter industrial fabrics, this false-splice will be satisfactory, and it is much faster than the true splice.

Creeling. Though the true splice is almost invisible and even the false-splice makes a neat joint, it is customary to run the spliced bobbins on the outside of the creel, preferably on the selvage. If the splicing has been done properly, a few bobbins of spliced yarn can be used on the selvage of each creel without impairing the quality of the warps.

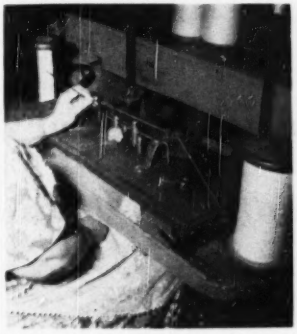
Operation of Plied Yarn False-Splicer

(For Use with Yarns of Less Than 6 Plies)

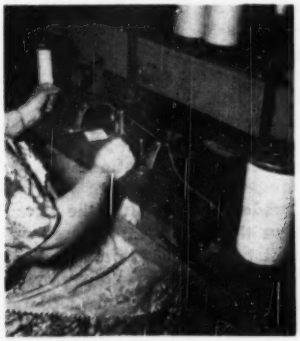
This false-splicer is much simpler than the true splicer and may be easily made in the mill shop. It consists of: **A** and **B**, the spools of yarn to be spliced, both resting on pins. **C**, the screw clamps. **D**, the knotting post, which slides on rails.



STEP 1. Yarn from each bobbin is passed under both screw clamps, the plies being separated two or three in a group, with a needle, or awl, and held separated by the clamps. It is important in this operation that the twist in at least one of the ends be run back *toward* the bobbin, to be held there by the clamp for reinsertion when the "splice" is completed.

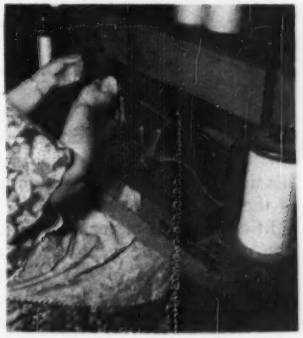


STEP 2. Each group is coupled with a group from the other bobbin and tied with a *square knot*. The knot is tied by having the knotting post hold the first half of the knot while the second half is being tied. The post slides on rails so that no two knots will be tied in the same place.



STEP 3. Photo shows knots after being trimmed with scissors. Operative is about to remove the yarn from the lefthand clamp to allow the twist, which is being held back by that clamp, to be reinserted in the yarn.

STEP 4. The twist has been reinserted and the operative is shown waxing the "splices." Note that this is not a true splice because the plies are actually knotted, but the knots are small enough to interfere with the running of the yarn in the subsequent processes, and are satisfactory for low ply yarns.



USING THE PERMA-PRINTER. Motor driven machine is mounted on table so that operator works her goods conveniently. She sets each bundle in front of the machine and folds all welts of the bundle back, as a unit; then she hinges each welt forward upon the machine platen. Welt drops out of way after printing.

More and Faster Hosiery Identification at Bryan Full Fashion Mills

Staff Prepared

SEVERAL MACHINES for printing the hosiery identification and brand name on nylon full-fashioned stockings have been in use by Bryan Full Fashion Mills, Inc., Chattanooga, Tenn., for a period long enough to determine that the equipment is a satisfactory means of speeding hosiery identification at reduced costs. Handling of the goods is also much less.

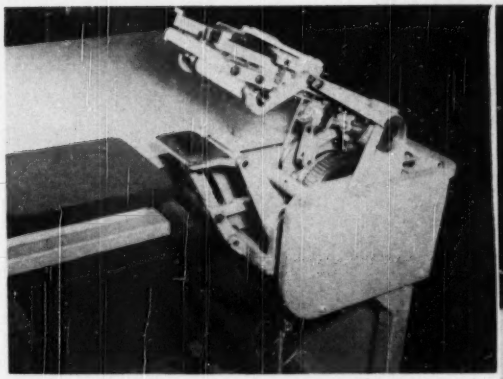
In addition to increased production of identification, the machine (termed the Welt Perma-Printer and manufactured by the Perma-Print Company of Chattanooga)

permits the hosiery mill to increase the amount of identification on the welt of the nylon stockings. For instance, on one Bryan welt the following information is given:

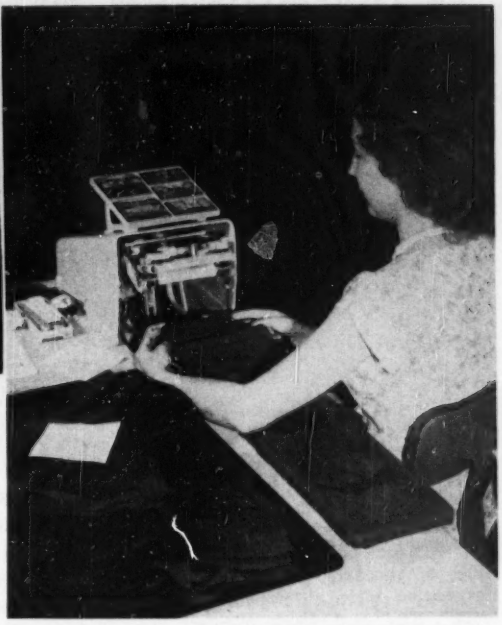
Beautiful Bryans
15 Nylon 54
Soubrette
10 R
2″

Should any of the last four lines need to be changed because of color or size or gauge, etc., it may be done in 15 seconds by the operator of the machine, who removes one lead-and-rubber slug (similar to a linotype slug) and replaces it with the proper slug. Production then continues.

Production. Although the record shows that one inexperienced operator branded 562 dozen in eight hours with only a few minutes of instruction, and another mill labels 1500 dozen per day with one



(Above) **MACHINE WITH COVER REMOVED.** Machine inks itself automatically; requires no operator attention until a change of mark is necessary.



(Right) **HOSIERY READY FOR PRINTING.** Welts are fed to machine at operator's speed. The speed can be varied. Machine operates continuously by holding down pedal. Extra printing slugs are in tray on top of machine; lines may be changed in 15 seconds.

operator (and conveyor to feed the stockings to her), Bryan does not think in terms of production. This mill has made no effort to set production records on labeling—it is interested in quality and the proper identification of *each* welt on a nylon stocking so that the consumer can for the life of the stocking see that they are Bryan's and so the stockings can be paired in color and size by the consumer, even in a poorly lighted room.

Relative Permanency. Tests* made on the hosiery with 0.5% Lux Flakes and hand laundered for three minutes at 100F showed that after fifty washings the identification had no appreciable alteration.

Neither does the label shadow off or fleck off in handling. Such is possible because the printing is actually on the nylon just as printed type is on paper, and because a special type of quick drying pigment ink is used (available in various colors) especially for nylon.

Removing Print. Although the identification may not be scraped off without injury to the nylon fibers, it may be removed with a solvent should an error be made by the operator of the machine, or it may be removed by proper treatment in re-dyeing. The comparative permanency of such hosiery identification may prove a ban to those businesses which cater to removing identification marks on sub-standard hosiery and re-labeling to the ultimate detriment of the hosiery industry and the consumer.

The present machine is designed for printing marks on nylon full-fashioned hosiery (welt or foot), but the machine may be arranged so that it can print in three different positions on the same goods if it is considered necessary, opening additional roads for novelty designs or novelty messages. Also, a machine is under development to serve the circular knit industry.

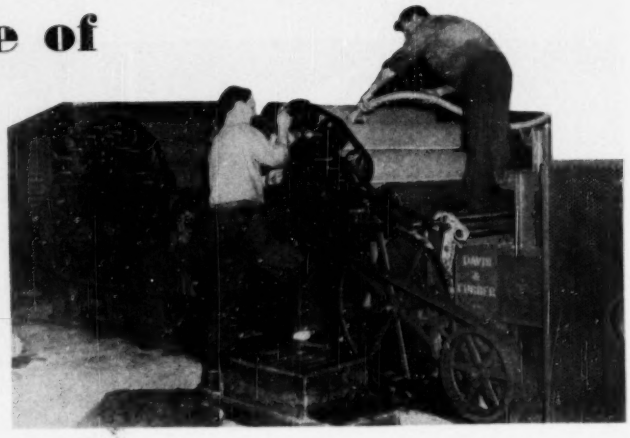
Since the machine prints from a rubber platen, the stocking is not bruised in the process. When an editorial member brought up the question of safety to the operative, it was answered by the person laying his hand under the printing section while it was running—his hand received the printed label, but no injury.

FACTS ABOUT THE PERMA-PRINTER

1. Flexibility. Any or all identification lines for the hosiery can be changed without serious loss of production. It usually requires about 15 seconds to change a slug from one reading to another.
2. Motor driven machine; occupies 3x4 ft floor space.
3. Speed of machine is variable to suit speed of operator. Operated by fast control. Prints can be made continually or one at a time.
4. Little training of operators is necessary.
5. Machine prints; heat is not required.
6. Operator may work from sitting position.
7. Additional slugs for changing printed lines are inexpensive.

*United States Testing Co.

Maintenance of Woolen Cards



EXCLUSIVE

By WILLIAM J. CROFTS

Part 1

PERHAPS on no other machine in the woolen mill can greater losses be sustained as a result of low operating efficiency. Conversely, it is possible to produce gr ater savings at this process than at any other by intelligent supervision and an effective program of maintenance.—W. J. C.

IN THE maintenance of woolen cards, as in many other lines of endeavor, "an ounce of prevention is worth a pound of cure." The card room overseer must be ever on the alert, observing the condition of his machinery and initiating preventive measures to hold down maintenance costs and reduce machine down time.

When compared with other departments in the woolen mill, maintenance costs in the card room are high. Yet money wisely invested for supplies in this department pays dividends, because the roving produced will be of high quality and in turn can be spun into quality yarn at minimum cost.

There are four major items of supply for the woolen card: *clothing, rub apron, belting,* and *tapes.*

Clothing. Clothing is the most expensive of these and a considerable factor in the cost of carding wool. But since the efficiency of the woolen card is dependent on the condition of its clothing, it is wise to utilize only the best.

Because of the wide variety of fibers used today, sizes of yarn made, and difference in methods of preparing the blends, it is not feasible to specify a time at which card clothing should be replaced. The condition of the wire should be the determining factor.

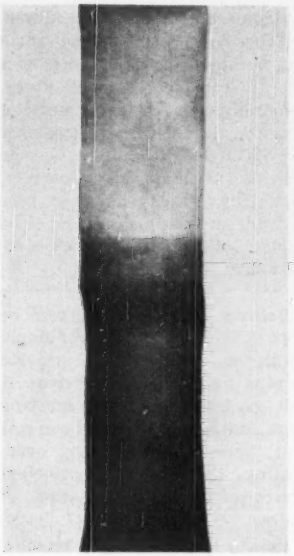
An experienced carder can determine the condition of card clothing by sight and touch. The pitch of the wire is determined mainly by pressing the finger tips against the points and judging the pitch by the resistance to pressure. Short, battered wire that has been in service too long can be quickly recognized and condemned by sight alone.

Quite often full length wire presents a good appearance when casually inspected, but close examination will reveal that much of the pitch has been lost by the impact of carding, and carding efficiency is reduced by 25 to 50 per cent. Such wire should be discarded for the sake of economy.

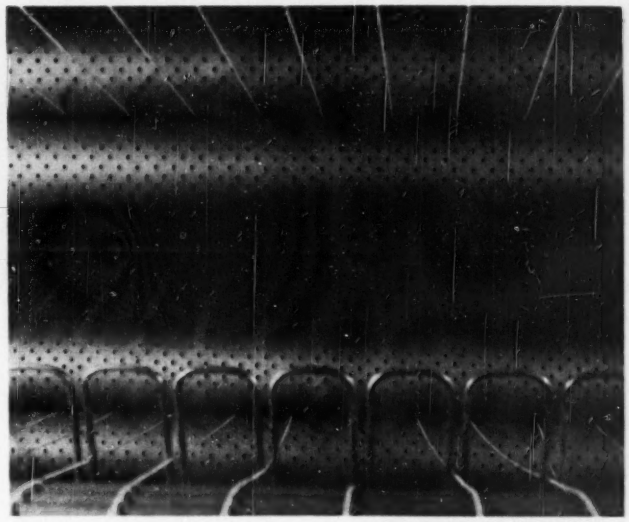
When the many advantages of good clothing are considered—top production of high quality yarns with high breaking strength, reduced shrinkage, and making practical the use of lower priced blends without sacrificing the quality of the finished product—it follows that management should not hold the overseer to a rigid maintenance budget. Unfortunately, these benefits are intangible and can be determined only by checking results over a long period of time; whereas a slash in the budget readily shows dollars saved. Savings on shrinkage alone will in many cases pay for the investment.

A card producing 500 pounds of roving per shift, 15 shifts per week, from coarse, rough wools (or 375,000 pounds per annum) should be carefully checked.

The first breaker card clothing, which absorbs the shock of opening the stock, has a very short life. In certain cases where the blends contain considerable foreign matter replacement of some of the clothing at the end of six or eight months (on a three shift production basis) may be necessary. On the other hand a card on fine flannel blends might produce 500,000 pounds of roving without any apparent decrease in the efficiency of the clothing, if the blends are



THIS RUB APRON was removed from a card that had been idle for several months. The dark portion at the bottom was exposed to light and atmosphere and is glassy and slick. The light portion at the top was protected by its twin apron and therefore is in good condition. To avoid this, aprons should be moved about eight inches every week.



"Textile Industries" staff photos

A LONG STROKE should be employed in order to utilize as much of the apron's rubbing surface as possible; this also permits operation with lower eccentric speeds.

carefully prepared and reasonably clean.

It is a known fact that woolen mills using much higher priced stocks pay less attention to the causes of shrinkage than cotton mills and have less accurate data with which to figure costs. Much of this is due to the variety of fibers and stocks that go into the manufacture of woolen yarns, making a specific allowance for card waste shrinkage unreliable. The major shrinkage usually is in the form of card waste and strippings.

The writer once took over a twelve-set card room, running entirely on high priced blends, the average price of which was approximately $1.35 per pound. Shrinkage (card waste and strippings, clean fiber basis) was .044. This shrinkage was eventually reduced to .028 or a savings, at a very conservative estimate, of $40,000 annually, based on a full production of 1,500,000 pound of roving per annum. About 60 per cent of this reduction was brought about by the installation of new clothing at points where it was most needed. The savings on shrinkage alone paid for the clothing many times over.

The useful life of card wire can be extended. When installing new clothing on the finisher cylinder and tape doffer, move the used clothing to the first section of the double finisher. In this way top efficiency can be maintained on the final and vital thread building cylinder and tape doffer. Since the first section is not quite so important, good used wire from the last section gives good service.

If there are four cylinders, used clothing from the third cylinder and doffer installed on the second section of the double first breaker gives gratifying results on fine "specky" stocks. This shifting of the clothing entails extra labor expense but is economical, gives more uniform results, and is most practical on the finer yarns.

Used worker wire applied to strippers is good practice and leaves that much more money for the purchase of new cylinder, doffer, and worker clothing. Wire that has lost some of its pitch is satisfactory; however, strippers on the last finisher section should always be smooth and sharp.

Rub Aprons. The life of rub aprons, like card wire, is governed largely by the nature of the stock in process. Coarse carpet wools having a greater abrasive action and requiring more condensing naturally will exact more wear on the aprons than a softer stock. Service of from six to ten months on a three-shift basis is excellent for aprons on rough stocks, and at the other extreme three years' service for aprons condensing soft stocks is not unusual.

Employing the longest possible stroke to make use of more of the rubbing surface of the aprons and allow lower eccentric speeds is economical. High eccentric speeds and setting aprons too close together cause friction, and heating of the leather or rubber exacts the maximum wear; this should be avoided, especially with rubber aprons.

The aprons on single rub condensers are required to do double duty and, since they have but one opportunity to rub the roving, must be kept in good condition. Also, higher eccentric speeds are necessary for best results. The life of these aprons, therefore, is much

A William Vandivert photo for the Wool Bureau, Inc.

THE PRACTICE of replacing individual tapes here and there in an old set is not recommended as this tends to increase the variation in size and weight of individual ends of roving produced. When tapes are cracked, worn, and stretched thin, as these shown here, then a whole new set should be installed.

shorter than that of the aprons on a double rub condenser where small defects on the apron surface are not so detrimental to smooth condensing. For maximum efficiency and subsequent low operating costs, it is not wise to keep aprons in service too long.

When a card is idle over a period of weeks, rubber aprons develop glazed streaks at the bend around the rub rolls. To avoid this, the aprons should be turned or moved about eight inches every week.

The life of both rubber and leather aprons is shortened by excessive tension.

Tapes. Tapes are nothing more than belts. In order to perform their function of dividing the web smoothly, it is necessary to maintain considerable tension on the tapes, and this is essential for good results on the long stocks. Because of this and the many sharp bends and twists the tapes must make around the small tape rolls, the life of tapes is much shorter than that of the average belt.

When cracks appear and tapes break, frequently causing lost production time; when tapes are worn and stretched thin, no longer filling the grooves and resulting in a sloppy or uneven dividing of the web and a poor quality roving, then a whole new set of tapes should be installed. The practice of replacing individual tapes here and there in an old set is not recommended as this increases the variation in size and weight of individual ends of roving produced.

Tapes on 1-run coarse stock deteriorate twice as fast as tapes on 2½-run soft flannel yarns. Generally, the life expectancy of tapes on the former is six months (on a three-shift basis) and one year on the finer yarns. However, production speeds must be considered, and the overseer must be guided solely by results and performance.

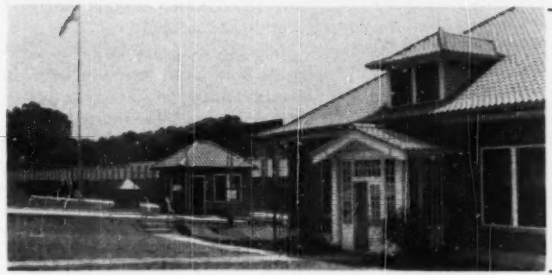
Belting. Belting costs can be kept down by using belts of ample width and thickness to provide surplus traction for the drives. A belt too light for the job must be kept unduly tight with the result that there is slippage and overheating; these are the principal causes of rapid depreciation of leather.

Heat developed by excessive friction burns the soft clinging surface, reducing traction. Excessive tension strains and damages the leather fibers all through the belt. Tight belts will cause bearings to become overheated and wear. Faulty work can be and often is caused by belt slippage and the resulting uneven speeds of the various rolls. A double belt will outpull a single belt of the same width, and with far less tension.

Flexibility is the prime requirement for a stripper belt which makes so many sharp bends as it passes over the small pulleys. The continual plying of the belts produces greater wear on the leather fibers. This belt should be light, double leather, preferably three inches wide to afford ample traction and power. The eccentric belt also should be flexible, and, being a heavy drive, the leather should be heavy double to give satisfactory economical service.

The useful life of belting can be prolonged by shifting used belts from the heavy to the light drives. For instance, as soon as the stripper belt shows signs of age and wear, a new belt can be installed and the used belt cut up for the lighter doffer, worker, licker-in, or feeder drives. Both of the condenser drives are in the heavy duty class, and these belts

(*Continued on page* 118)



Aberfoyle's New Plant

Staff Prepared

EXCLUSIVE

EXTENSIVE revamping of the former Martin Dyeing & Finishing Co. property at Bridgeton, N. J., has provided the Aberfoyle Manufacturing Co. with a highly efficient yarn processing organization at half the cost of new construction.

Core of the modernized layout is a U-shaped production line (see plan view) with facilities to handle 7,500,000 pounds of yarn annually. Ends of the line converge on adjacently located shipping and receiving platforms. Access to plant is by rail or road on two sides of the building.

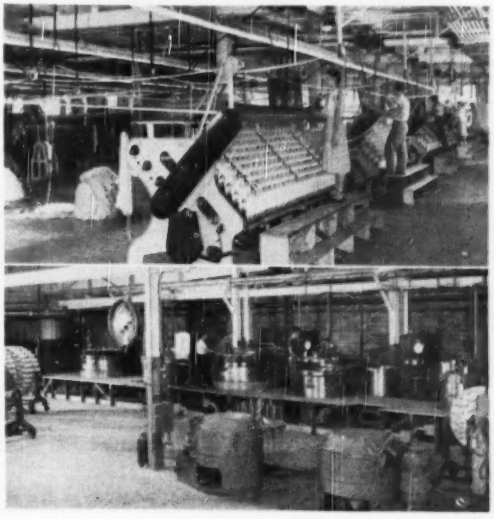
The latest available equipment for mercerizing, bleaching, gassing, dyeing, and winding gives the 150,000 sq ft plant sufficient capacity to handle Aberfoyle's northern accounts. Package, skein, and warp dyeing on every type fiber or yarn is possible with a wide range of Smith-Drum and Venango dyeing machinery installed.

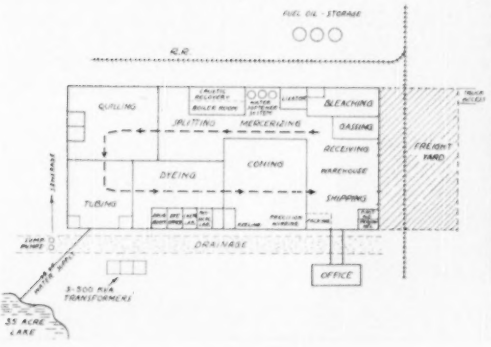
Additional features of the mill are three 500-kva transformers, two 50,000 pounds steam per hour water tube integral boilers, a 10,000 lb package boiler, a caustic recovery system, Lixator, and water softening apparatus.

Particularly important as a factor in yarn processing is Aberfoyle's abundant and consistently pure water supply. Source is a 35 acre spring fed lake near the mill. Gravity fed to the plant, this water is used for wash, diluent, and boilers without treatment. Total water consumption is 8,000,000 gallons daily.

Though the lake solved the problem of a pure water source, it posed another one which might have had serious consequences except for a well-engineered solution. The surface of the lake being 14 feet above ground level of the mill, would have resulted in hydrostatic pressure interfering with drainage and dryness around the building. However, alongside the plant nearest the lake, an

THE U-SHAPED PRODUCTION LINE as employed at Aberfoyle's Bridgeton, N. J., plant may be seen in the sketch below. Note how the ends of the line converge on the adjacently located shipping and receiving platforms. Photos at right are scenes in the quilling room (top) and dyeing department.





enormous sump was excavated. A 2 hp motor pumps as much as 200 gallons per minute out of the sump into the city sewerage lines.

The dyehouse derives further use from the lake water in a unique sluice cooling system built beneath the dyehouse floor. Having an underground capacity of 4,000 gallons, the sluices receive discharges from dyeing machines. The effluent is cooled and diluted, then passed on to the sewerage system. Though not primarily designed for such, the underfloor circulation tends to keep the dyehouse temperature at a comfortable level.

Exhaust type fans in the dyehouse and elsewhere are capable of exhausting 300,000 cubic feet of air per minute. Fluorescent lighting and natural lighting provide excellent visibility throughout.

Key Points Necessary for Quality Control in Textile Mills

An effective Quality Control department will eventually control itself out or will control itself down to a bare minimum of both personnel and applications, said Pressley Agnew of Bemis Bros. Bag Company, Talladega, Ala., speaking before the American Society for Quality Control meeting at Georgia Tech on September 22.

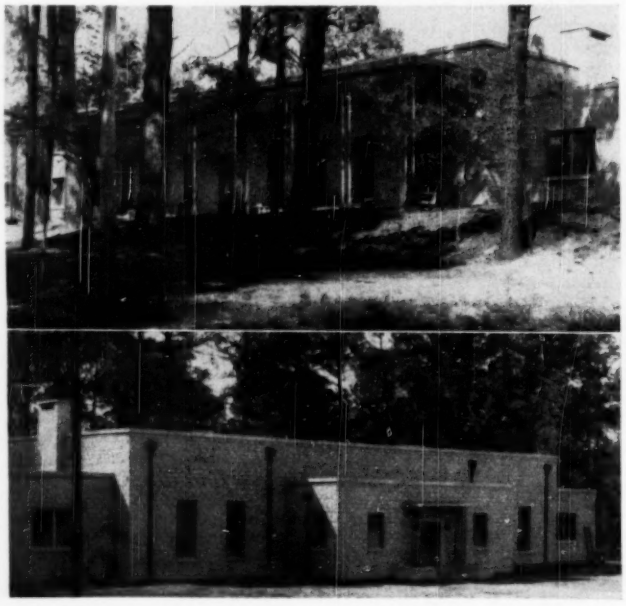
Comments made by Mr. Agnew follow:

At first the number of control applications actually are cumulative and tend to pyramid at an alarming rate as the technique of quality control becomes more familiar. But later, as numerous controls at various points of manufacturing become firmly established and as they begin to "click," they come to be accepted by those of the "old school" who may have responsibilities related to the control of stock quality at various stages of manufacturing—then it becomes apparent that there are only a minimum of key points where controls are necessary to insure the maintenance of quality clear through the mill from the opening of cotton to the finished product.

The acceptance of quality control methods by assistant supervisors throughout the plant requires a selling job by the quality control department because of the rather awesome terms and the mechanics and techniques of quality control.

If the quality control program is to attain its objectives, then top management, production supervisors, and laboratory personnel must be brought into contact with all problems entailed.

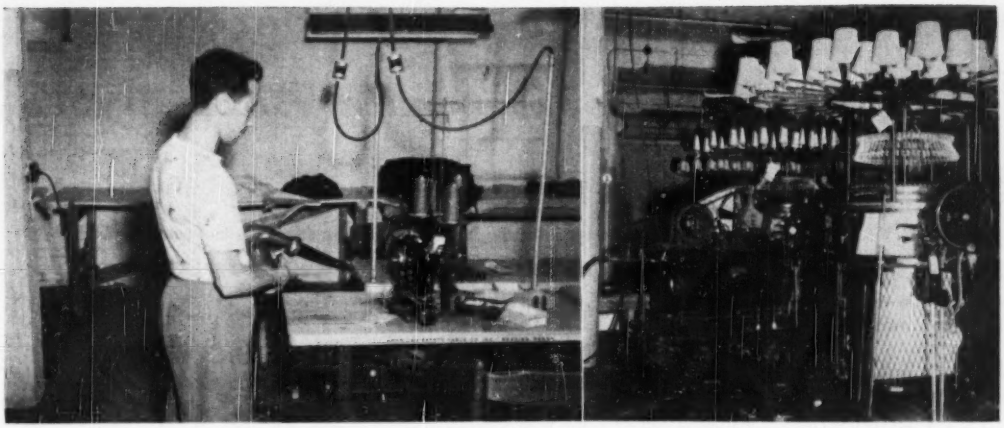
COMMUNITY BUILDING RECENTLY DEDICATED AT GRANITEVILLE



The recently completed Community Building at the new Gregg Park Civic Center in Graniteville, S. C., was built and is maintained by the Gregg-Graniteville Foundation, Inc., for the benefit of the employees of the Graniteville Company and residents of Graniteville, Warrenton, and Vaucluse, S. C.

Upper photo is view of front of building which overlooks a beautiful lake. As can be seen from the bottom photo of the rear of the building, it is of permanent type construction, being built of granite, steel, concrete, and tile.

Included in the park are a bath house of comparable construction, swimming area, picnic grounds, and other recreational facilities.



SMALL HAND VACUUM CLEANER (left) is used to remove lint and dust. Readily convertible to blowing, this device weighs only four pounds and can be plugged into any wall outlet. Right, larger 1100-watt unit is equipped with a 1 hp motor, compressor, and tank mounted on casters.

Tubular Knit Goods Plant Employs

Portable Vacuum, Blower Units for Cleaning

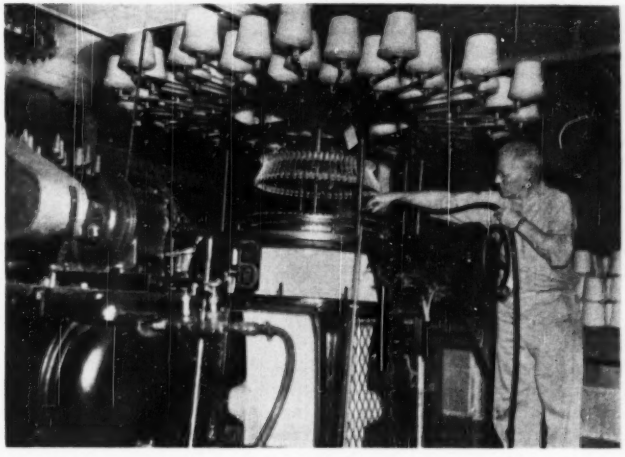
PORTABLE vacuums and blowers are a major item in Summit Mill's preventive maintenance program. Machinery in the Philmont, New York, plant's knitting, cutting, and sewing departments are regularly cleaned by air even though a central air supply is lacking.

For such delicate equipment as cutters, stitchers, seamers, button hole and other sewing machines, a Clements "Cadillac" hand vacuum is used to remove lint and dust. Operating on 110 volts ac-dc, this model is readily convertible to blowing—in which case the dust bag is detached. It is also used to clean lighting fixtures, floors, corners, tables, and bins. The device is rated at 460 watts, can be plugged into any convenient wall outlet and weighs only 4 pounds.

A larger 1100-watt unit, consisting of a 1 hp motor, compressor, and tank, which is mounted on casters is used to blow down ribbers and interlocks in the knitting department. Furnished by Brunner Manufacturing Company, the blower is wheeled around to various sections as needed.

EXCLUSIVE

Staff Prepared



Large cleaner is used to blow down ribbers and interlocks in the knitting department. It may be moved to sections as required.

Casting Out for Jacquard Flexibility

Quick, heavy demands for a particular Jacquard design can be met by making use of cast-outs to adapt looms to the job.

By DONALD A. BARRETT
Albemarle Weaving Co., Inc.
Charlottesville, Virginia

THE JACQUARD decorative fabric field, with its practically unlimited potential of design and decoration, is a constantly changing one, presenting to mill men never-ending problems of production and delivery.

Since there is no way of knowing beforehand how enthusiastically a new pattern will be received, it is impossible to anticipate with any great degree of accuracy just how extensive the demand for it will be. A new pattern or a new fabric construction, which at its introduction seems to attract no unusual attention, may suddenly burst forth with an overwhelming popularity. By the same token, there is no standard by which it may be determined how long and to what extent this sudden popularity will continue.

Spontaneous Demand. Manufacturers of Jacquard decorative fabrics quite often are confronted with the problem of having to satisfy the demands of sudden, unforeseen influxes of orders for certain patterns or constructions, and these sudden demands oftentimes are far beyond the productive capacity of the available Jacquard looms for which the goods in question were designed.

Plants which are equipped with several types of Jacquard harnessties are particularly susceptible to this condition, and unless the problem can be met and rapidly dealt with, much valuable business will be lost. Failure to devise quickly the means to cope with such a situation, can be very discouraging and frequently embarrassing as well as costly to the sales organization.

Increased Loom Hours Not Full Answer. There are, of course, several obvious methods which could be employed to attain increased production of the required goods. But since production increase in a situation such as this is required only on a certain class of goods, merely increasing the loom hours is seldom the answer to the problem. The productive cost structure on which the selling price was based, must be maintained; and increasing loom hours for only a portion of the plant would usually result in production cost increase.

Alteration in Construction When Possible. Minor alterations in pattern or construction in order to utilize different equipment which is available might in some cases be resorted to, and this solution may be perfectly acceptable. On the other hand, many patterns and constructions do not lend themselves to any deviation from the samples being shown by the sales organization.

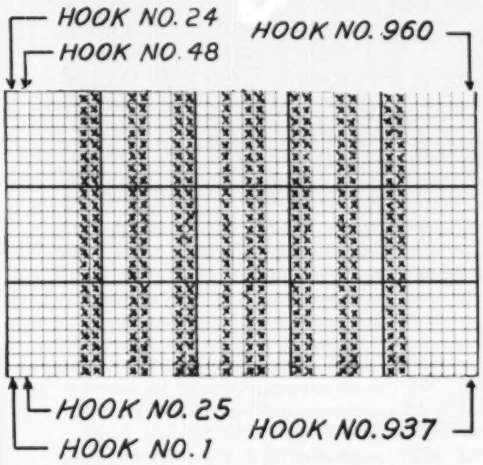
Casting Out. A technique frequently employed in dealing with a situation of this sort is "casting out." The "cast-outs" in Jacquard looms are merely certain harnesses through which no warp ends are drawn and which are deactivated by not employing the hooks in the Jacquard head which control them. By means of casting out, looms carrying Jacquard heads of a greater hook capacity than the looms for which the fabric was originally designed, may be adapted to producing goods which are identical in every respect to the original fabrics.

A Jacquard harness must last for many years; installing it is an expensive, painstaking, and very exacting operation. Any manipulation of the harness in casting out, therefore, must be carefully planned so that it will not be detrimental to the future performance of the harnesses involved, when the Jacquard head is again returned to operating at its original hook capacity.

In determining which hooks of the Jacquard machine are to be unemployed — and consequently which harnesses are to be rendered inactive — consideration must first be given to the manner in which the cast-out harnesses will be distributed in the comberboard of the loom. Whenever possible it is good practice to arrange the unemployed hooks on the pattern card so that a complete short row of harness is cast out.

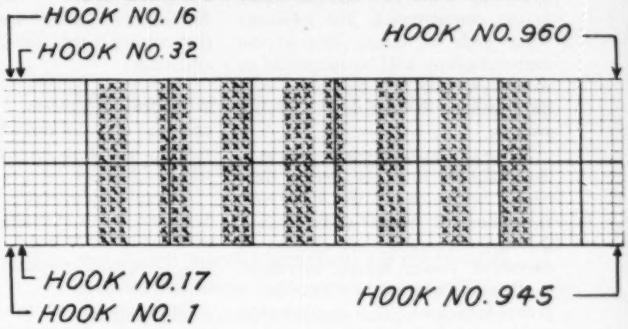
Eliminate Frictional Contact of Harnesses. The harness distribution must be arranged in such a fashion that no undue frictional condition will be imposed upon the warp. Care must be taken when planning the cast-out distribution in the comberboard to keep bunching or grouping of cast-out harnesses to a minimum. If the

SECTION OF 24-ROW COMBERBOARD GOVERNED BY A 960 HOOK PATTERN CARD



Each square represents a harness in comberboard
Each marked square represents a cast-out harness

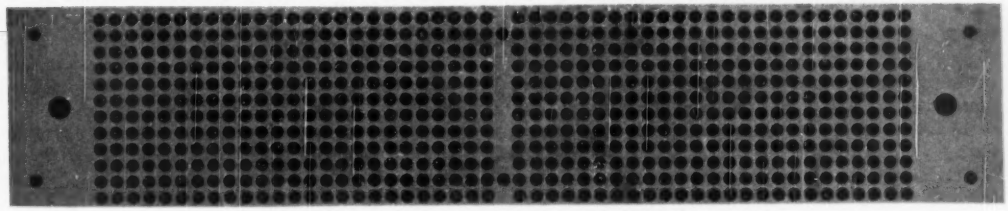
DIAGRAM OF 960 HOOK PATTERN CARD



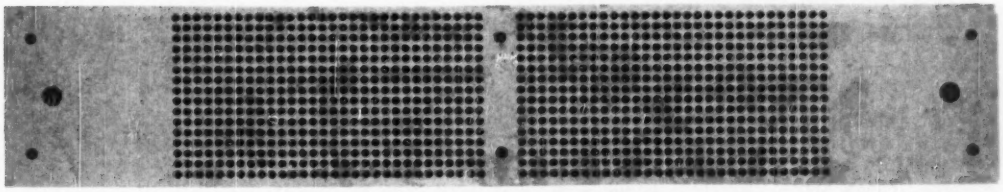
Each square represents one hook; each marked square is an unemployed hook

Harness is tied straight. Hook No. 1 controls harness No. 1, through which is drawn warp end No. 1, and so on until 1200 hooks (600 on each card), harnesses, and ends are used. This is repeated three times more for a total of 4800 functioning harnesses of the 7680 available.

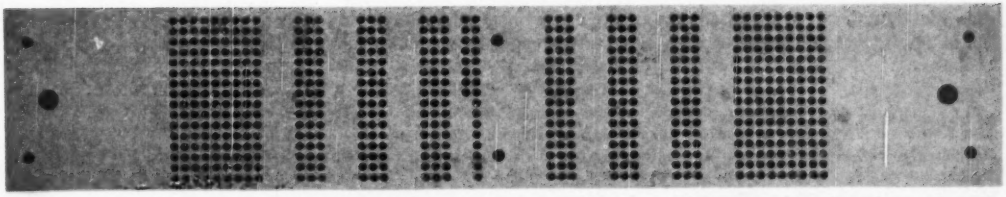
PATTERN CARDS



Card used for original pattern on 1200 hook French Index Machine
600 hooks - 2 cards = 1200 hooks



Card used on 1920 hook fine index machine
960 hooks - 2 cards = 1920 hooks



Card used on 1920 hook machine but cast out to use 1200 hooks
600 hooks - 2 cards = 1200 hooks

grouping of the cast-out harnesses is too concentrated, the adjacent warp ends on either side of the cast-out group will be subjected to excessive rubbing wear which will be a source of continual weaving trouble.

Since the cast-out harnesses lack the stability of those active harnesses which have the steadying influence of warp ends drawn through them, they are subject to excessive sway, which increases as the number of cast-outs in a group increases. This undesirable sway must be controlled by rods placed at the lingoes or by other suitable means.

It is important also in planning the cast-out distribution in the comberboard that the distribution be as simple as possible so that twisters, weavers, and smash-hands will not have to deal with elaborate systems of warp draws.

Designing for Cast-Outs. In most cases, designing for the Jacquard machine on which the cast-outs are to be employed presents no particular problems for the experienced designer. The original point paper design, even though designed for a different machine, along with new card cutting instructions applicable to the cast-out plan, is frequently sufficient for the card cutter's use in cutting the pattern cards for the cast-out machine.

Typical Problem. A typical problem and the manner in which casting out was employed in its solution follows:

An upholstery fabric originally designed for, and made on a loom carrying a 1200-hook, French Index, Jacquard machine will serve as an example.

The harness of the 1200-hook loom is tied "straight" with four repeats across the comberboard for a total of 1200 x 4 (1200 hooks x 4 repeats), or 4800 ends. The 1200 hooks of this loom are governed by two pattern cards of 600 holes each. The warp used on this loom and required for this fabric is made of 4800 ends.

There are available, we will assume, a number of looms which, if properly adapted, can produce identical goods and thus supplement the production of the 1200-tie looms on which the original fabric is being made. Each of the available looms is carrying a 2608-hook, Fine Index Jacquard machine, the harness of which is tied on only 1920 hooks of the available 2608 hooks. This harness is also tied straight with four repeats across the comberboard for a total of 1920 x 4 (1920 hooks x 4 repeats), or 7680 harnesses (lines). The 1920 hooks of this machine are governed by two pattern cards of 960 holes each. The comberboard on these looms has a short-row capacity of 24 holes.

Since it is intended, by casting-out, to reduce the number of functioning harnesses (lines) from 7680 to 4800 in order to use the required 4800-end warp, only 600 hooks of the 960 hooks on each card are employed. The remaining 360 hooks must be unemployed in order to deactivate the harnesses (lines) attached to them. The hooks to be unemployed must be selected and arranged in a manner that will permit good distribution, in the comberboard, of the deactivated or cast-out harnesses.

The diagrams on page 99 show a suitable cast-out arrangement which can be used for adapting the 2608-hook, fine index machines and their looms to the pattern originally designed for a 1200-hook machine. This arrangement meets the conditions of casting-out previously mentioned and permits both the loom and the Jacquard machine to operate at maximum efficiency.

Major Features of Pacific Converter Listed

Major features of the Pacific Converter were listed by Robert C. Wilkie, director of engineering research, Pacific Mills, Worsted Division, at a recent meeting of the American Association of Textile Technologists:

I. The Pacific Converter costs but a fraction of the machines it replaces.

2. Two to four converters to one operator.

3. At 100% efficiency, the converter produces 140 pounds per hour on nylon or Fiber "V"; 160 pounds per hour on viscose or acetate; and 180 pounds per hour on Vicara.

4. The total conversion cost per pound is less than three cents, including the one-half cent royalty, direct and indirect labor, burden, etc.

5. A minimum of waste; year round waste on 100% nylon, including converter and two gillings into top, 0.2 of 1%. Will improve as tow improves.

6. Low maintenance due to all rotating parts; one exception being the variable cut device.

7. Better staple diagram.

8. Characteristics of base material absolutely retained.

9. Blending control.

10. Wool breaking.

11. Intangible feature of flexibility.

Direct conversion of filament tow-to-sliver is here and here to stay, said Mr. Wilkie. As time goes on, undoubtedly, there will be other approaches and also improvements made on the Pacific Converter. The tow manufacturers are rapidly improving the quality and desired characteristics of the tow.

(A feature article describing this machine appears on page 99 of Textile Industries for August, 1949. —Ed.)

NEW OFFICERS of Northern N. C.-Va. Division, STA. Left to right: **Howard Barton,** Fieldcrest Mills, secretary; **G. R. Ward,** Highland Cotton Mills, president; **Irvin Payne,** Dan River Mills, vice-president.

Production Problems Discussed at Draper

Northern North Carolina-Virginia mill men talk about maintenance, carding, spinning, standards, and waste control

Staff Report

IT IS the practice at the meetings of the Northern N. C.-Va. Division, Southern Textile Association, to divide the group into discussion conferences following the main address and in these conferences to encourage full participation of those present in discussion of practical mill production problems. Some of the discussion at the last meeting* is reported as follows:

Mechanical Maintenance. Several mills have been having trouble with corrosion in their kettle-to-slasher distribution systems. There has been specific trouble with thermometer bulbs in the distribution lines, the bulb elbows corroding away in a relatively short time. One mill has overcome this trouble after discovering a 2-volt difference between the thermometer and the size box. Installation of a grounding strip has, so far, solved the problem. Since it is agreed that corrosion of all types is an electrical action, it was suggested that cathodic protection be tried in serious cases.

It was pointed out that many of the feed and recirculating pumps used in size distribution depend largely on the size, itself, for lubrication. One mill had found that the use of ball bearings in these pumps reduces maintenance considerably. Practically all maintenance on these pumps before the installation of ball bearings had been in the reboring and replacing of worn sleeve bearings.

There was considerable discussion on eliminating condensation of moisture in air lines, but no mill had found any way to successfully solve the problem. Traps, separators, and drip legs are used with varying success. It was, however, agreed, that the piping lay-out has much to do with the amount of condensate encountered. A separator at the compressor was agreed to be a necessity.

Carding. Experience with pneumatic pressure systems on pickers has been good. Mills have found more uniform laps, breakage has improved, and yardage has been increased. An increased pressure of 75 pounds was suggested.

In answer to a question as to the best roll settings on 4-roll drawing for 1 in. cotton, one mill proposed 1¾ in. for fourth to third, 1½ in. for third to second, and 1 5/16 in. for second to first. Other mills suggested wider settings, depending somewhat on sliver weight.

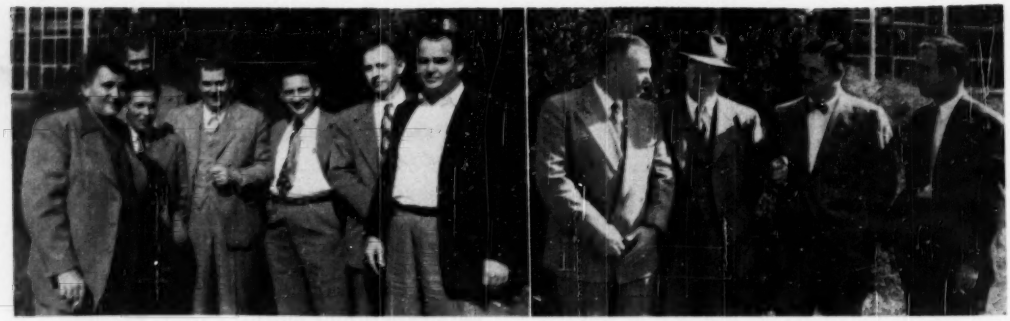
Ball bearing comb boxes were highly recommended, since they require less maintenance and need lubrication but once a year. Ball bearing lickers-in were found to be satisfactory, and they operate, it was said, at a very low cost.

Spinning. This conference showed considerable interest in cleaning schedules in the spinning room, and the following schedule was recommended: Blow off frames once every 144 hours. Brush ring rails once per shift. Rolls are picked with a mechanical roll picker once every 24 hours, and rolls are oiled at that time. Back rolls are cleaned every 72 hours. Clearers are wiped monthly. Revolving clearer is cleaned once every 72 hours. Travelers are changed once a week, and spindles are also cleaned at that time. Frames are completely overhauled every 1,000 hours. Spinners, themselves, rub creels twice in 8 hours and clean guides at the same time. Air pressure used in blowing varies from 30-60 lb.

Standards. Most participating in this conference agreed that quality will go down when an operator is put on piece work. For example, when a card tender is put on piece work, he has a tendency to run a card when it is making bad work, whereas, if not being paid on piece work, he would stop and have the card fixed. Similarly, piece work in the cloth room lowers quality, and inspectors have a tendency to pass bad material when paid on a yardage basis. Better quality resulted in one mill when the slasher job, which was measured, was put back on an hourly basis with no change in the work-load.

Maintenance of earning levels when changes are made in yarn or fabric is a major problem. One mill has found it practical to guarantee average earning during the time it takes to make measurement studies. New rates are then in-

*October 14; Draper, N. C.



Some of those attending and participating in the meeting.

stalled for a trial period of four weeks. If earnings are not up to average after four weeks, operators may file a grievance.

Quality Control. Representatives of the quality control departments of the participant mills were most interested in the procedures being developed for the mill use of electronic evenness testers. It was pointed out that some mills had been successful in determining from test runs on yarns the exact point in processing where unevenness occured. Evenness testers used in this way will show where machinery is out of adjustment or work is poor. On the other hand, it was agreed that sliver testing was most important to turning out even yarn. Even sliver makes even yarn, other factors being the same.

These men were interested in the progress being made on development of an electronic lap meter at the Institute of Textile Technology. It was stated that the machine was already developed as a measuring device, but more work was required before it could also be used as a controlling instrument for the picker, as originally planned. The instrument should be available to member mills as a measuring instrument shortly. The Institute will now run test laps for member mills.

How many spindles should be tested in an evenness tester to get a true picture of the mill run? The answer to this question has been carefully and simply determined, again at the Institute of Textile Technology, and a graph has been published in a report to show just how many spindles need to be tested to get a true picture of results. Again, however, this report is available only to member mills.

In comparing the values of the Brush and the Uster machines in evenness testing, it was pointed out that much depends on what the mill wants. The Brush machine is much faster, but an attachment has been made available for the Uster which increases its speed. Furthermore, the Uster machine will show up neps as unevenness while the Brush will not. Therefore, the Uster machine can be used as a nep counter, but when unevenness and not neps is the question, the Brush is easier to use. [*Recently, an attachment has been invented for the Brush machine which will include neps as part of the graph if desired. Ed.*]

Waste Control. This discussion group was interested in a waste control system which has been used for some time in one of the larger mills in the division. The questions asked and the answers given by the mill using waste control are printed below.

How is the waste control system set up?

Our waste control system was set up by Barnes Textile Associates. The system used is called the "Wastemeter," and it shows all types of waste by process throughout the mill.

What is the best way to set up a waste control system?

First you determine all types of waste. Then keep figures for several weeks to help set up standards. In arriving at standard percentages, be sure to calculate from process input.

How does a waste control report make a foreman waste-conscious?

It pin-points all types of waste that are in excess. Our report also shows in dollars and cents how much money was lost because of this waste.

What is a good percentage for reworkable waste?

We think that between six and eight per cent is good.

In carding, how much do you allow to be torn off the end of your laps?

One mill—one-half yard; another mill—one yard.

How much reworkable waste do you have in the card room?

Around four per cent.

What is a good percentage for set-back laps?

This depends on how much changing of stock is done. With a normal amount, three per cent would be a good figure.

What types of waste do you find in spinning?

Scavenger, bobbin strips, yarn, and sweeps.

Do you use a bobbin cleaning machine?

Yes.

Does it scratch the bobbins?

Not if it is correctly set.

What causes most of the waste from the spoolers?

Improper starting of the spinning frames causes considerable.

What types of waste are found in slashing?

Hard and soft yarn.

What types of waste are found in the weave room?

Feeler, filling thread, warp yarn, and sweeps. The greatest control is over feeler waste.

HAND MICROPHONES were provided for those in the audience participating in the discussion so that all might hear the comments from the floor. This facility is part of a public address system recently purchased for the Harrison Hightower Textile Engineering Building auditorium by the cotton mills of Georgia through the Textile Education Foundation, Inc.

Georgia Mills Participate in

Discussion of Slashing Techniques

Staff Report

THIRTY Georgia mills and mill groups, operating 1, 490, 374 spindles and 33, 008 looms, responded to the questionnaire prepared and distributed before the meeting by the governing board of the Textile Operating Executives of Georgia. This report is a consolidation of information contained in the printed answers to the questions and that which was brought out at the technical session at Georgia Tech.

A WEEKLY SAVING of approximately $115 has been effected at the slashing process in a Georgia cotton mill since the installation of equipment for homogenizing size. So stated a representative of the mill before the Textile Operating Executives of Georgia during their fall meeting at the Georgia Institute of Technology in Atlanta on Oct. 21.

"We are running 1,300 looms with warps sized with a homogenized mixture," he said. "So far we cannot see any increase or decrease in loom efficiency due to the change in the method of size preparation.

"We have five slashers on

TEXTILE OPERATING EXECUTIVES OF GEORGIA OFFICERS FOR 1951

Succeeding **John S. Turner,** agent, Bibb Mfg. Co., Columbus, Ga., as General Chairman of the Textile Operating Executives of Georgia is **H. M. Jackson,** assistant superintendent, Fulton Bag & Cotton Mills, Atlanta, Ga.

R. J. McCamy, superintendent, Pepperell Mfg. Co., Lindale, Ga., is the new Vice-General Chairman, filling the vacancy created by the elevation of Mr. Jackson to the chairmanship.

Re-elected for the 29th consecutive year as Secretary-Treasurer of the organization is **Robert W. Philip,** vice-president and director of research, Callaway Mills Co., LaGrange, Ga.

Albert Johnson of the Lanett (Ala.) Mill Division, West Point Mfg. Co., was elected a member of the Executive Committee for a term of 2½ years.

General Chairman **H. M. Jackson** (left) of Fulton Bag & Cotton Mills in Atlanta, Ga., and Vice-General Chairman **R. J. McCamy** of the Lindale, Ga., plant of Pepperell Manufacturing Co.

Georgia Slashing Discussion

★ **Experiences with Homogenizers**
★ **Use of Starch Modifiers**
★ **Striking or Counting Leases**

homogenized size and they slash an average of 500 pounds an hour each. The homogenizer with a capacity of 800 gallons an hour has to run about 55% of the time."

The homogenizing equipment enabled the mill to use pearl starch instead of thin boiling starch. According to the report, this is where the saving is being realized.

Preparation of Homogenized Size. Size is prepared at this mill in the following manner:

(1) One-third of the required amount of water is drawn into the kettle.

(2) 14.0 ounces of starch are added for each finished gallon.

(3) Water is brought to required level.

(4) Size compound (6.25% based on weight of the starch) is added.

(5) Mixture is heated to 200 F.

(6) Batch is homogenized with first stage valve only at 1500 psi.

(7) Temperature of storage kettles is maintained at 185 F and size box at 200 F.

Someone asked for the starch content when using thin boiling starch. 16 ounces per gallon was the answer.

Another mill man wanted to know if size is held over the week-end. It was stated that size is held over the week-end; however, every effort is made to reduce the quantity to the minimum before slashers are stopped.

In response to a third question from the floor, "Have you noticed any difference in the size content of your yarns," the mill spokesman said that apparently the pick-up is approximately the same as it was before homogenizers were installed.

Similar experiences were reported by a representative of another plant where homogenizing equipment has been in operation for approximately one month. Loom stop tests were made, and it was found that the averages were the same as for yarns sized with thin boiling starch. Smoother splitting at the lease rods has been observed. No savings have been effected in labor.

Starch Modifiers. A starch modifier is used by one mill in conjunction with Votator cooking equipment. Pearl starch is converted with H_2O_2. This type of modifier is used because of the speed with which it acts. It is necessary that action take place in a short time because of the short cooking time. Good results are obtained with this arrangement.

Striking or Counting Leases. Out of 23 mills reporting on the question "Do you strike or count a lease on the slasher," 17 count, 2 strike, and 4 use both methods.

LEADING the discussion on slashing practices was **James A. Byars,** superintendent of the cotton mill at Riegel Textile Company's Trion, Ga., division.

One of the mills where striking leases is the only method employed gave as the reason for this practice a lack of sufficient slasher capacity. Production, in their opinion, has not suffered on narrow goods (32″ to 50″ up to 118 sley). On wide goods (70″ to 100″) production may be slightly affected, but not a great deal, said the report.

The other mill that uses this method exclusively is making fabrics of 96 sley or less, 50 picks per inch, 36″ wide. No difference in the number of warp stops on the loom was found when comparing results with struck leases and counted leases.

A test reported by a mill that counts its leases showed that warp stops per loom hour caused by crossed ends on counted leases were .005 as compared with .024 on struck leases. Fabric being woven was 68 sley, 48 picks per inch, 39¼″ wide.

"We feel that it [counting all leases] is worth the time and cost for the psychological effect on the help," said one mill superintendent, "whether the warps run better or not."

In a mill where both methods are employed, leases are struck on plain warps up to 56 sley, but they are counted on all others.

Size Pick-Up and Slasher Speeds. Five of nine mills reporting on this subject are of the opinion that the per cent pick-up of size is greater when warps are slashed at high speeds as compared with warps slashed at low speeds. Three find that there is no difference, while one adjusts the size formula in accordance with the predetermined speed.

Quality and Slasher Speeds. There is no difference in quality of warps slashed at high speeds as compared with low speeds, according to four mills. One mill maintains that the quality is much better since there are not so many loose fibers or whiskers protruding from the yarn. Another mill noticed that quality is lower.

Lease Rods and High Speed Slashing. Differences noted at the

lease rods on slashers running at high speeds as compared with those running at low speeds are as follows:

Mill B: Ends break at lease rods.

Mill G: Gets a somewhat better split at higher speeds.

Mill K: On light sets, at high speeds, ends tend to become slack behind lease rods.

Mill L: There is more shedding at the lease rods.

Four mills reported that there is no noticeable difference.

Shedding at Loom and High Speed Slashing. Warps slashed at high speeds shed no more or no less than those slashed at low speeds, in the opinion of five Georgia mills. Three have found that there is less shedding at the loom if warps are slashed at slower speeds. One mill man believes that high speed slashing produces less shedding at the loom.

Georgia Slashing Discussion

★ **High Speed Slashing and Size Pick-Up**

★ **Pneumatically Loaded Squeeze Rolls**

★ **Stainless Steel Squeeze Rolls**

Pneumatically Loaded Squeeze Rolls. Four high speed slashers in a Georgia mill are equipped with pneumatic loading devices on the size boxes for exerting pressure on the squeeze rolls. Comments regarding the installation were unfavorable, indicating that considerable mechanical trouble had been experienced; also that there is no way to be absolutely certain that equal pressure is being exerted on each end of the squeeze roll. However, a mill representative pointed out that his was one of the first installations made by the equipment manufacturer and for that reason he felt that a large portion of their trouble was due to inexperience.

One advantage was cited for this apparatus, however—that is, the ability to increase pressure on the rolls to accommodate a new blanket at normal operating speed.

Stainless Steel Squeeze Rolls. One mill has had entirely satisfactory results with squeeze rolls covered with stainless steel. Squeeze rolls on all slashers at that plant are covered with stainless steel; also stainless steel heads are welded to the shaft to make the rolls water tight. This, according to the mill representative, eliminates the necessity for covering squeeze rolls with white lead; also eliminates rust coming through the blanket. Blankets can be changed in approximately 15 minutes with the use of a special glue to stick the material to the stainless steel. A six-month test with these rolls revealed a saving of $113.76 in slasher cloth. This is attributed primarily to the fact that no rust soaks through the cloth.

Highly satisfactory results were reported by another mill using squeeze rolls made entirely of Monel metal. These rolls have been used for a period of four months. Hard deposits of dye and caustic build up slower on these rolls than on copper rolls when slashing indigo dyed warps.

Nylon-Wool Slasher Blankets. Sixteen mills reported experience with slasher blankets made of blends of nylon and wool. Three of these are using the cloth on front and back squeeze rolls with satisfactory results. One mill finds the material satisfactory for use on the back roll only; it was tried on the front but did not dress the warp as well as a conventional blanket. Another mill is using the cloth on one of its slashers on both rolls;

Variation in Size Content

Mill	Sley	Yarn Count	Standard Per Cent Size	Per Cent Variation
A	———	2.70s to 18s	10	1
B	80 48	31s 15s	12-14	2
C	29 to 64 64 to 100 100 to 110		8 10 14	3-4
D	96 to 118	24s and 31s	14	1.5
G	108	17s	11	10 to 12
I	68	22s	12.5	9.5 to 14.2
J	46	14.5s	12	None
K	36-40	10s	12	2
L	Below 56 Above 56	21s 21s	9-11 12-14	1
M	———	14s and 16s	3	None
N	96 118 88	23s 17.5s 17.5s	10	3
P	30 to 40	10s to 14s	10	3
Q	14 to 32 44 64 80	30s or 40s 30s 30s 30s	4 8 10 12	2
R	42 to 56	17s to 30s	10	2
T	Printcloth and Sheeting Rayon and acetate blends All-viscose rayon		12 12 10	9-14
V	40 to 112	12s to 17s	9 (light mix) 12 (heavy)	2-3
W	Type 140 Sheeting	20s	13.5-14	2.5
Y	———	———	12	12-15
BB	———	———	8 to 9 (ground warp) 3½ to 4 (pile warp)	———
CC	———	8s	9	Very little

Georgia Slashing Discussion

★ **Nylon-Wool Slasher Blankets**

★ **End Breaks at Split Rods**

★ **Variation in Size Content**

the blended blanket was found to be serviceable for about 600 hours, whereas the conventional blanket has to be replaced after 160 hours. The remaining eleven mills reported unsatisfactory results.

Advantages cited for the wool-nylon blanket were: Longer life; less stopping of machines for changing blankets; lower cost per slasher hour operated.

Disadvantages: Material becomes hard more quickly; it collects lint and trash; more time is required for it to soften after week-end shut-down; greater variation in size pick-up; breaking strength of fabric is reduced slightly since less starch is left on yarn; produces rough yarn.

End Breaks at Split Rods. In an effort to prevent ends breaking at the split rods, a mill superintendent told the assembly of Georgia mill men that he had changed from a small center "busting" rod with a diameter of 1½" to a larger rod with a diameter of 2½"; also he replaced his small ¾" lease rod with a 1½" rod.

In addition to this a wet splitting rod 1" in diameter has been installed on the slasher so that it splits the yarn about three feet from the size box. This rod is set in ball bearings and is turned by a belt from the squeeze rolls. Tension on yarn is adjusted so that yarn will burst about 1½ inches behind the spilt rods.

"We use split rod settings that are normal," said another mill man, "about 5 inches apart with a height variation of 2 to 3 inches in the slasher frame. By keeping these distances, excessive tension seems to be relieved. Smooth, straight rods help. By using a tension control device between the size box and drying cylinders, breakage and stretch can be held at a minimum. We find it desirable to check cylinders not positively driven, also."

In reply to a question from the floor "Is there a great advantage in having a split rod near the size box," the first gentleman that commented on this question said that the arrangement had been entirely satisfactory in his plant and was of advantage in reducing end breaks. On the other hand, the second participant in the discussion reported poor results and stated that use of the device had been discontinued.

(The January 1951 issue will carry a report of Weaving Discussion.—Ed.)

Causes and Remedies for Variation in Size Content

Cause
New blankets on squeeze rolls.

Remedy
Mill P: Two blankets are used on each squeeze roll. When a new one is installed, it is placed next to the roll surface.
Mill V: New blanket is first placed on back squeeze roll and run there for two or three days; then it is moved to the front roll.

Cause
Condition of blanket on front roll is unsatisfactory.

Remedy
Mill A: Blankets are checked twice each week to insure their being in good condition.
Mill G: Blankets are changed often enough to keep them from becoming hard.
Mill L: A sufficient amount of blanket is kept on the rolls.

Cause
Variation in viscosity of size.

Remedy
Mill A: Installed Viscometer to register the viscosity of the size at all times.
Mill G: Installed system for automatically weighing and handling starch, measuring water, and controlling cooking process. Size does not remain in boxes for more than 15 or 20 minutes. Viscometer on storage kettle gives an indication of viscosity of size at intervals of three minutes during the entire day.
Mill T: Long periods of storing size are avoided. Size maker is checked frequently.

Cause
Yarn next to cylinder dries before yarn on outside dries, since size follows moisture on into yarn next to cylinder.

Remedy
Mill B: Yarn is run from back size box around back cylinder; yarn from front size box is run around middle cylinder; then yarn from both cylinders is run together on the front cylinder. This procedure results in setting the size in both sheds before bringing them together for complete drying.

Cause
New yarn on squeeze rolls.

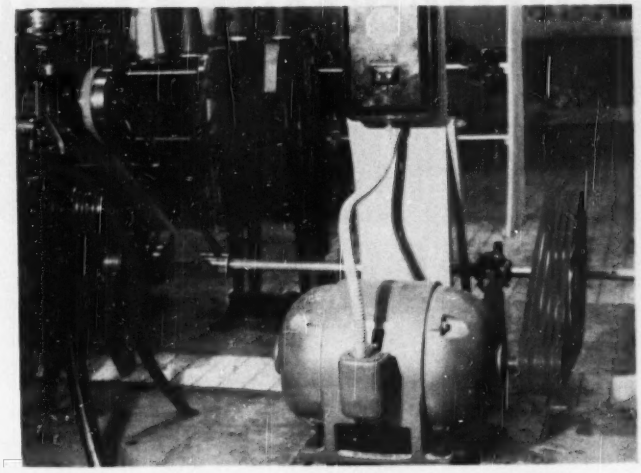
Remedy
Mill I: Immediately after winding the rolls with new wool yarn each day the size pick-up was found to be 14.2%. After these rolls had run for 24 hours, the pick-up was about 9.5%. To remedy this, rolls are wound a half round each shift instead of a complete round once a day.

Cause
Variation of temperatures in the size box.

Remedy
Mill L: Temperature controls are checked regularly and calibrated.

Other causes cited for which no remedy was given:

(1) Variation in speed of slasher.
(2) Variation of steam conditions (wet and dry).
(3) Variation of tension on yarn.
(4) Too heavy or too light squeeze rolls.
(5) Depth of size roll in size box.
(6) Variation of liquid level in size box.
(7) Dilution of size by water from wet beams.



A 10 HP MOTOR drives 68 hosiery knitting machines and nine ribbers from a single line of shafting 110 feet long since machinery was rearranged for expansion of production facilities.

Seamless Hosiery Mill

Uses Center-Driven Line Shafting

Shaft and bearing maintenance reduced by eccentric bearings and new drive arrangement for circular knitting machines.

Staff Prepared

EXCLUSIVE

AT MARYON Hosiery Mills, Inc., Carrollton, Ga., shafts 110 feet long are mounted on the floor and serve to drive groups of circular knitting machines. Each shaft is driven from a point half the distance from each end. A 10 hp electric motor drives 68 circular knitters and 9 ribbers from a single line of shafting.

Driving the shafts from a centerpoint is advantageous in that fewer electric motors are needed, the shaft is more rigid, and the new arrangement prevents trouble with shaft misalignment, shaft flexing, and shafts being twisted or bent. Bearing troubles have been reduced also since the change was incorporated.

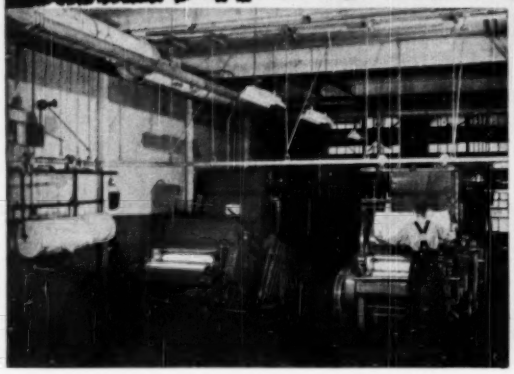
Eccentric anti-friction bearings were installed on the shafts and at the point where power is applied. This measure has aided in reducing overload conditions and also serves effectively to dissipate any tendency toward excessive bearing wear caused by shaft flexing. Power takeoff is now accomplished through a multiple V-belt drive from the electric motor to the shaft. More nearly constant speed is maintained also. Maintenance costs have been reduced considerably as compared with the old drive.

Formerly, this mill used an arrangement including a 75-ft length of shaft with a motor at one end. The motors were 7½ hp each, and 54 knitting machines were driven by each motor and shaft; however considerable difficulty was encountered in trying to maintain good shaft alignment and to minimize bearing troubles due to bent shafts.

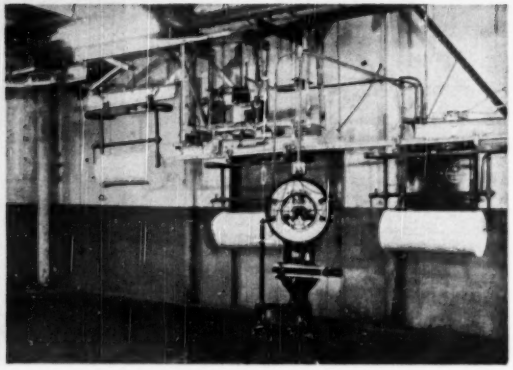
The change was incorporated when Maryon Hosiery Mills expanded their facilities for production and installed improved drives on all machines placed in operation according to the revised layout. Experience with the old shaft driven arrangement indicated that the change was necessary, and other knitting mills have used the present drive with excellent results.

AUTOMATIC LAP DELIVERY

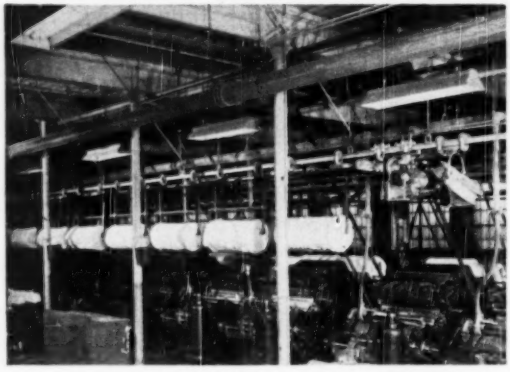
that Reduces Handling Cost
Eliminates Lap Waste
Keeps Ceilings Clean



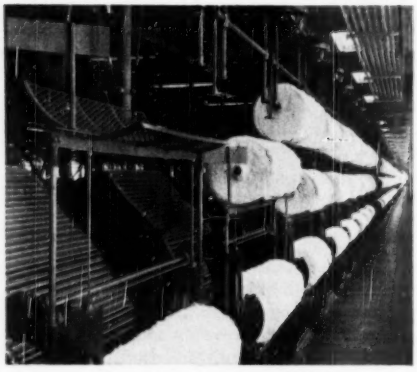
1. Carrier manually loaded at pickers; all subsequent handling entirely automatic.



2. Weight checked within 1½ lb. tolerance. Off-weight laps rejected — full-weight laps delivered to card room — all automatic.



3. Train of 20 carriers travel over cards — pushed by MonoTractor which also propels ceiling cleaner.



4. Lap automatically deposited in receiving tray. Weight of lap lowers tray, allowing passage of following carriers.

Many mills are looking to American MonoRail for better, quicker and more economical automatic handling and cleaning. An American MonoRail engineer will be glad to discuss your problems.

THE AMERICAN MONORAIL COMPANY

13106 ATHENS AVENUE **CLEVELAND 7, OHIO**

THERE WAS LIVELY PARTICIPATION in the technical discussion by mill men from all sections of Alabama.

Alabama Mill Carding Practices

Staff Report

ALABAMA Textile Operating Executives met in Langdon Hall, Auburn, Alabama, October 28, to discuss mill problems in carding and spinning. The forum on carding practices was conducted by Wilson Patterson, superintendent, Tallassee Mills, Tallassee, Ala., during the first portion of the meeting. Grady Webb, assistant superintendent, Langdale Mills, Langdale, Ala., led the session on spinning.

Elected to serve on the executive committee were Homer Roberts, Anniston Manufacturing Co., Anniston, Ala., and J. D. Whatley, Textron Southern, Inc., Cordova, Ala.

Pneumatic Rack Control. The discussion meeting opened with a question regarding the advantages of the pneumatic rack control over the regular friction type on pickers. One mill reported using pneumatic control on ten pickers, and the device maintained 40 lb pressure at all times. The racks remain level, more yards can be put onto each lap, doffing time is reduced, and there is less work for the tender, according to this mill man's report.

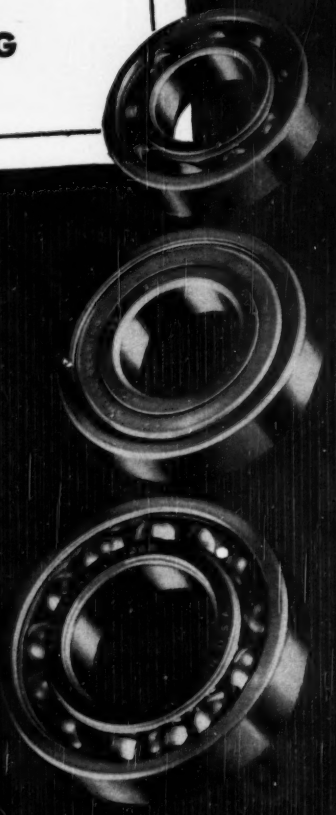
The diameter of the lap was formerly 17″ and was reduced to 14″ by the pneumatic controls, although the same yardage was on the lap. Eight additional yards of work increased the diameter to 17″, and no disadvantages were noted. The laps are kept for approximately 2 to 3 hours before they are used, and no fluffing was observed. Present laps are 13 oz and 68 yards long; present weight of the lap is 58½ lb as compared with 52 lb, former weight.

THE FORUM on carding practices was conducted by Wilson Patterson, superintendent of Tallassee (Ala.) Mills.

Another mill indicated that the time required to doff pickers was reduced 42%, and an increase of 3.5% in production was noted. The standard lap was 16″ in diameter and 52 yards in length. Operating the pneumatic rack control at 50 lb pressure, the lap diameter was reduced 9.4% to 14½″. Lap yardage was increased from 52 to 58, representing an increase of 11.5%, while maintaining a lap diameter of 16″. Laps run 11.5% longer at the card, due to the increase in yards per lap. Investment in the installation is expected to be amortized in 50.5 weeks through increased production in the picker room. In this instance there were no indications of laps splitting or being irregular in ounces per yard. Lap weight was increased from 47½ lb to 53 lb. No disadvantages have been encountered to date.

A spokesman at the meeting said that his mill had increased lap weight from 43 to 54 lb, maintaining a 16 oz lap. Diameter was increased from 18½″ to 19½″. A

Best Things in Life are Free – RUNNING



Friction has some use
but mostly it is
freedom from friction
this world needs.
In machines, that freedom is
essential to long, useful life.
Ball bearings give you most,
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12

weight increase of 26% was accomplished with a 5% increase in diameter of the lap. 20 lb pressure is applied to the rack, and the spokesman said that pressures over 30 lb caused laps to stick in his mill. No disadvantages were noted.

Card and Drawing Maintenance. The second question on the agenda requested a detailed discussion on card and drawing maintenance with particular reference to the number of cards ground and set by the grinder, whether the same man is responsible for the maintenance of a certain portion of the drawing, and his duties with reference to each phase of the work. Data presented in answer to this question is given in an accompanying table.

Automatic Ceiling Cleaners. Among the mills answering the questions, eight indicated that they had not used automatic ceiling cleaners and could not evaluate the usefulness of such equipment. In a report at the meeting, one man said that all operatives had to help clean up periodically before ceiling cleaners were installed.

Now the cleaning schedule calls for blowing down overhead once every two or three months instead of once every week, thereby saving about an hour and a half production per week and the cost of blowing down. The return on the investment is about 15% in this instance. Quality is improved, and no disadvantages were in evidence at this mill.

Another answer to the question regarding ceiling cleaners itemized advantages as follows: Keeps ceiling cleaner at all times; formerly lost 30 minutes production each shift on cards to clean overhead (grinding jobs included section of ceiling to be cleaned) 3800 sq ft of ceiling per shift or 78.9 minutes per 40 hours; considerable savings in lost production; when ceiling cleaners are used, less waste goes into processed stock; considerable savings in labor.

Labor savings were indicated as follows:

30 minutes per day for 15 card tenders
30 minutes per day for 6 card grinders
30 minutes per day for 6 card strippers
30 minutes per day for 3 card strippers
30 minutes per day for 3 card room sweepers

Eight men formerly blew down overhead eight hours each week. Now one man blows down overhead eight hours each eight weeks; 63 hours saved weekly.

In one instance ceiling cleaners were installed in 1947 and paid for the investment in two years by saving on cost for blowing down. Now this mill blows down once in eight weeks, and a cleaner ceiling is maintained in addition to permitting better quality work.

In relating experience with mechanical lap handling, this mill had excellent results. The card tenders like the lap handling system because it eliminates the need to push laps around and handle them. Waste is reduced because the laps now stay in better condition than when they were manually handled.

Advantages of automatic ceiling cleaning, according to one Alabama mill are: It keeps lint from accumulating on the ceiling; saves $2000 in labor costs per year. The only disadvantage claimed was that occasionally it will blow an end down on a card as it makes a turn at the end of the line.

Cleaner ceilings, walls, and posts were secured by installing automatic ceiling cleaners in one mill reporting at the meeting. No large pieces of lint fall into the work, and the overhead cleaner reduced the slugs in roving.

In a mill using automatic ceiling cleaners over cards, drawing, and fly frames, the installation (made in 1947) cleans 64,000 sq ft of the

Alabama Carding Practices

- ► **Pneumatic vs. Friction Rack Control on Pickers.**
- ► **Card and Drawing Frame Maintenance**
- ► **Automatic Ceiling Cleaners**

CARD AND DROWING MAINTENANCE DATA

Mill No.	Hrs. Between Grindings	Lb. Between Grindings	Hrs. Backs Set	Hrs. Tops Set	Cards per Grinder	Dwg. Frames per Grinder	Dwg. Rolls Cleaned	Cards Ground/ Day per Grinder	Who Oils	No. Cards	Lb./Hr. Carded	Hrs. Cards Ground
A	312	4368	624	312	—	None	1x8 wks.	3	Oilers	146	14	——
B	240	3883	46 days	19 days	58	None	12 days	6	Oilers	473	16	3
C	340	4400	680	680	57	None	3 mos.	2	Grinder	——	13	6
D	360	4275	15 days	30 days	30	None	——	2	Grinder	480	12	6
E	504	5700	40	40	40	None	48 hrs.	2	Grinder	——	11	4-8
F	Warp 336 Fill 216	5171 1804	720	720	50	None	8 hrs.	3	Fixers	——	Warp 15 Fill 8	4-6½
G	280	3911	1584	1584	63	None	1x wk.	3	Strippers	——	14	——
H	192	2784	384	384	47	16	1x4 wks.	2	Grinder	——	14	8
I	480	7000	960	960	61	None	——	3	Fixer	——	14	16
J	300	3000	1800	900	33	None	1x wk.	4	Grinder	——	10	6
K	264	2720	22 days	22 days	22	None	1x4 wks.	2	Grinder	——	11	6
L	326	3034	978	978	102	None	7 days	3	Oilers	204	9	5-7
M	160	2000	33 days	33 days	100	None	2 wks.	5	Grinder	——	11	8
N	Metallic Clothing	——	3 mos.	3 mos.	No Grinding	None	——	—	Fixer	——	——	——

New Life for an Old Mill

Butterworth Compartment Washer in the continuous Dyeing Range, Pontiac Division, Fruit of the Loom, Inc., Pontiac, R. I. Washer includes eight 4-ton squeezes and a final 8-ton squeeze shown in foreground.

with Butterworth Continuous Dyeing Range

Pontiac Division, Fruit of the Loom, Inc., obtained the benefits of finishing in range despite construction obstacles in an old-fashioned New England mill. Working with Butterworth engineers, Pontiac installed a Butterworth Continuous Dyeing Range . . . achieved straight flow production at a speed of 7,200 yards per hour.

Entering section of the new Butterworth Dyeing Range is in the space formerly occupied by an old power plant. Air drying is arranged between the floors of an unused lumber storage loft. Padding, dyeing and washing are accomplished in the bleachery proper where it is possible to get proper tension. For final can drying, cloth is taken upstairs. Many of the rooms are low-ceilinged and irregular. Credit for adapting this Range to the restricted location goes to the Pontiac management.

All new Butterworth Machines are included with the exception of the Steamer which is a converted Ager. The Range consists of a 2-roll Pad, Air Dryer, 3-roll Pad, Steamer, 9-Compartment Washer, and a 42-can Dryer.

Here is actual proof that an old mill can obtain all the advantages—higher speeds, lower costs in time and labor, greater profits—with Continuous Dyeing. Proof, too, of the flexibility of a Butterworth Continuous Dyeing Range.

Regardless of the age, or physical layout of your mill, Butterworth can show you how finishing plant economies can be achieved. Tell us about your production problems — talk to a Butterworth engineer.

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BUTTERWORTH

mill and saves $68 to $70 per week by not requiring further cleaning. Results include better quality work, better working conditions, and safer working conditions. The only disadvantage mentioned was in trying to get around lights, belts, and other obstacles when the equipment was installed.

Better labor relations were secured through use of automatic lap handling equipment, according to one mill superintendent. This mill has reduced waste and has had overall good results using the lap handling equipment.

At this point during the meeting someone asked what effect drafts had on the laps as they move past doors and other openings. In answer to the question one speaker stated that some laps are torn and the problem has not been satisfactorily solved.

Someone asked if it were possible to use mechanical handling equipment when several mixes of cotton are run simultaneously. One mill was running three mixes successfully by chalk marking laps of different varieties, and the card tender keeps the laps segregated according to the marks.

Another mill man explained that his mill flags laps of different types and the flag trips a switch which automatically puts the flagged laps on the correct line.

Reworkable Waste in Card Room. In controlling reworkable waste in the card room, a speaker for one mill said that laps are kept on trucks to prevent damage before they are used, and lap pins are oiled to reduce hard lap ends. Cans are kept around cards, and waste is weighed before each shift is completed. Waste figures are posted for each operator before the shift is over. A similar system is used on drawing and slubbers so that each operator knows how much waste he made on each shift.

Waste percentage figures for various operations as presented by the mills reporting are shown in an accompanying table.

The final question on carding asked for information regarding the best way to control waste at drawing and roving frames. Some of the answers to this question are given as follows:

Mill A. We use flat clearers and pick often enough to keep clean.

Mill B. We have stationary clearers on our breaker drawing (top and bottom). Top clearers are picked each doff and bottom clearers picked twice per shift. We have stationary clearers on finisher drawing (top and bottom). Top clearers are picked each doff and the bottom clearers are picked each creel. Our slubbers have stationary clearers (top and bottom). Top clearers are picked twice per shift and bottom clearers are picked once per shift.

Mill C. Good clearer cloth is picked regularly and at frequent intervals to control clearer waste.

Mill D. It is best to control clearer waste by scheduled cleaning of clearers and having clearers picked at each doff.

Mill E. We pick drawing clearers three times per shift and pick roving frame clearers two times per shift.

Mill I. Use revolving clearers on drawing.

(Spinning discussion will be published in the next issue.)

Alabama Carding Practices

- ► **Lap Handling System**
- ► **Reworkable Waste**
- ► **Roll Coverings and Clearers on Drawing and Roving**

ROLL COVERINGS AND CLEARERS ON DRAWING AND ROVING FRAMES

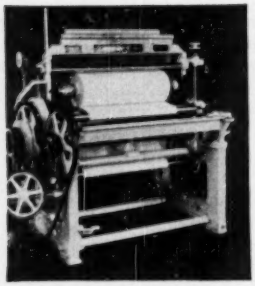
Mill No.	Roll Covering		Top Clearer	Bottom Clearer
	Drawing	Roving		
A	Synthetic	Synthetic	Flat	Flat
B	———	Cork and Synthetic	Stationary (wool flannel)	Stationary (wool flannel)
C	Metallic	Cork	Stationary	Stationary
D	Synthetic	Synthetic	Flannel	Flannel
E	Synthetic	Synthetic	Flannel	Flannel
F	Synthetic	Synthetic	Flat	Flat
H	Metallic	Cork	Stationary	Stationary
I	Metallic	Synthetic	Plain	Plain
J	Metallic	Cork	Stationary	Stationary
K	Cork	Cork	Revolving	———
M	Cork	Cork	Stationary	Stationary
N	Synthetic	Synthetic	Oscillating	Flat

PERCENTAGES OF REWORKABLE WASTE

Mill No.	Card Lap	Card Front	Drawing	Slubber	Where Waste Fed Back
A	1.52	.259	.0314	.422	Opening
B	2.00 Lap and Front		.25	.25	Picking
C	1.25	.50	.35	.25	Picking
D	———	———	———	———	Opening
E	1.092	.364	.769 Dwg. & Slubbers		Opening
F	1.50 Total	———	———	———	Opening
G	3.22 Lap and Front		.28	1.01	Picking
H	.96	.04	.06	.03	Opening
I	1.25	.25	.40	.50	Opening
J	2	1.5	.5	.2	White at Opening Colored at Picking
K	1.56	.11	.37	.39	Opening
L	1	1	1	.9	Picking
M	2	1.25	1	.75	Opening
N	1.05	.25	.45	.37	Picking

New Camachines® have stepped up production without increasing costs. Speeds like a mile-a-minute on the big newsprint winders. And 1000 f.p.m. on delicate slitter-rewinder operations where 400 f.p.m. was tops only a few years ago. Along with high speeds are many revolutionary new performance features adding to roll quality, providing greater versatility and more simple operation.

New *Camachine* performance gives you a great opportunity to increase your production, increase your market and increase your profit. No matter what material you work with—paper, plastic, rubber or textile—you'll please your customers by offering faster delivery of top quality rolls. With the *right* new *Camachine* working for you...



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48-220

Dyeing Wool Stock, Tops, and Yarn

By ROBERT W. JOERGER

EXCLUSIVE

Article 6*: Vat Dyes (Continued)

Anthraquinone Vats. Vat dyes of the anthraquinone class have not been considered suitable for wool dyeing because they require more alkali for dissolving and maintaining the dyebath. If the amount of alkali is lowered, the dye is likely to precipitate, while the percentage of alkali used for dyeing of cotton is liable to damage the wool. Secondly, the anthraquinone vats have rather low affinity for wool, and the weak shades coupled with the high dyestuff price retarded their use.

However, in recent years the problem has been re-examined to develop more suitable methods for the application of these dyes to wool. Of the many proposals, two methods have worked out very well in commercial practice, and they are outlined here.

Method 1. The dyestuff is dissolved in the usual manner and the final dyebath of 100 gallons is made up to contain a total of 3 lb of caustic soda, 3 lb of hydrosulphite and 1½ lb of sodium lignin sulphate (as a protecting agent). The alkali in those cases where the solubility of the dyestuff permits, may be tri-sodium phosphate; if this is used, the amount is 6 to 18 lb per 100 gallons.

The well wet-out wool is entered cold and circulated from 5 to 15 minutes. The temperature is raised to 120 to 140 F in 20 to 30 minutes; after this salt may be added to exhaust and dyeing continued another 15 minutes. After rinsing, the goods are oxidized with peroxide and acid, rinsed, and then finished with a synthetic detergent.

A typical procedure for dyeing 500 pounds of wool slubbing in a 900-gallon dyebath would use 20 lb of caustic soda, 20 lb of hydrosulphite, and 12 lb of sodium lignin sulphate. The reduced vat dye is added after dissolving for example 10 lb of a vat grey with 3 lb each of caustic and hydrosulphite for 10 minutes at 140 F in 20 gallons of water; circulate for 10 minutes, raise to 120 F in 30 minutes, add 100 lb of common salt over a 15 minutes period; rinse, oxidize with 6 lb hydrogen peroxide (120 vol.) and 40 lb acetic acid (28%) for 10 minutes; drop; finish with 5 lb synthetic

*Articles 1, 2, 3, 4, and 5 were published in the April, May, July, August, and October issues, respectively.

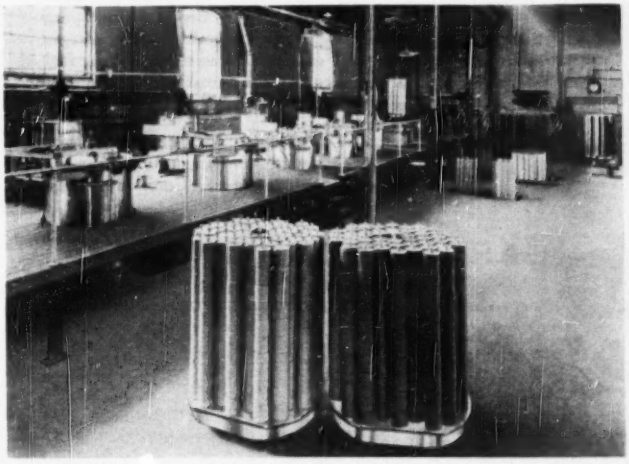
Morton System for Package Dyeing Woolen and Worsted Yarns

The Morton System for dyeing woolen and worsted yarns in package form consists of the same parts as the Morton System wool stock dyeing machine (described on page 121 of Textile Industries for May), except that a package carrier is furnished instead of a raw stock loading cross.

The only difference in the mechanical operation of the machine is the fact that the hydraulic system of the yarn dyeing machine is so arranged that the flow of dye liquor may be changed by use of a reversing valve.

Unit is available with controls for completely automatic operation. Also can be furnished for manual operation.

Provision is made for drying the dyed packages.



Courtesy, Morton Machine Works

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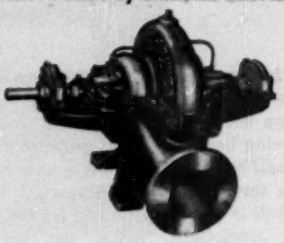

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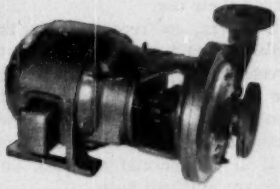

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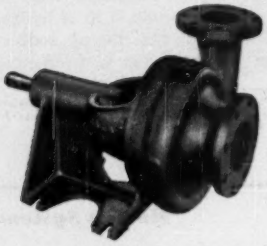
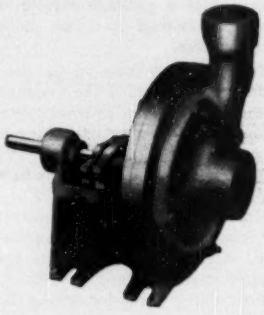


SIDE-SUCTION UTILITY PUMPS Sealed ball bearings are factory lubricated — never need greasing — for capacities up to 3000 g.p.m. and heads up to 100 ft.



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detergent at 180 F for 15 minutes; rinse.

Method 2. The second method uses even more alkali and no protecting agent, but the temperature is kept low—around 90 F—and never over 110 F. The caustic soda is kept between 3 and 4½ lb per 100 gallons. The dyestuff is dissolved in a tenth of the dyebath, using 2½ to 3 oz. per gallon of caustic and of hydrosulphite. The neutralizing is done with bicarbonate which converts the caustic into soda ash; in this state the wool can be rinsed without washing out any of the unoxidized color. The oxidizing agent is sodium perborate. Finally the goods are acidified to give the wool a more lofty feeling.

The procedure for worsted tops or raw stock is as follows: Wet out well, keeping the goods below the liquor at all times. Circulate the caustic and hydrosulphite not needed for dissolving the dye for 5 to 10 minutes at 90 F; add the reduced color, circulate 10 to 15 minutes; raise the temperature to 110 F, run 15 minutes; add 2 to 6 oz. common salt per gallon, run 20 to 30 minutes more; drop; rinse for dark shades; circulate an excess of bicarbonate of soda solution 5 to 10 min.; oxidize with 2% perborate of soda and acidify.

For both methods there are about twenty dyestuffs available that provide a wide range of shades. The fastness of these dyes on wool should be investigated, especially as to light, because this does not always correspond to the known properties for cotton. In either method the dye may be circulated first in pigment form before adding the caustic and hydrosulphite; but such a pigment method is only successful where the dyeing and reducing temperatures of the dyestuff are about the same.

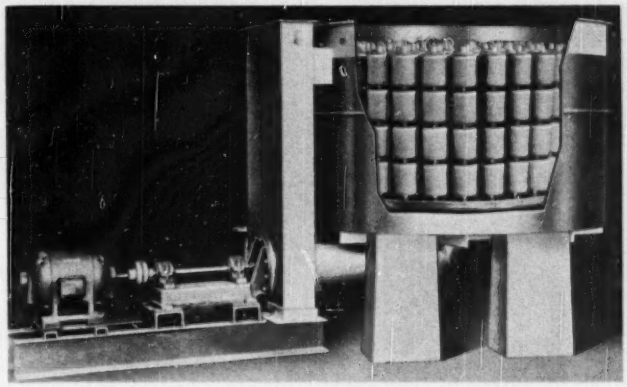
Leuco Vat Esters. These were first marketed as Indigosols, later as Algosols, and more recently by other dyestuff manufacturers under different brand names. As stated before, they are water soluble derivatives of indigoid and anthraquinone vat dyes which can be applied to wool in a neutral or slightly acid dyebath (note: no alkali problem); and after an acid oxidation, the original vat dyestuff is regenerated with its excellent fastness properties.

The fastness to light of these dyes (with the exception of Orange HR) is remarkable. For example, a 0.10% dyeing of Indigosol Blue 04B does not fade in 20 days. Testing of fastness to light should be done with sunlight as in some cases Fade-Ometer exposures are abnormal. For instance a gray combination may fade in 40 hours in the Fade-Ometer (light fastness No. 4) while in sunlight it will show little change in 150 hours (light fastness No. 7).

The leuco vat esters have good affinity for wool, and some are fast to laundering even before they are oxidized, proving the point. Their dyeing properties have been recently reported on, and we now know more about their affinity and exhaust rates under different pH and temperature conditions.

Algosol O (formerly Indigosol O), which is derived from indigo and yields the indigo shades on oxidizing, is somewhat different in dyeing and oxidizing properties than the others and so will be discussed first. It can be dyed like an acid dye with 3% sulphuric acid and Glauber's salt if desired, slowly bringing the temperature up to a boil, at which point it should be exhausted. The greatest affinity lies in the 130-160 F range, and where properly controlled will give good results. The oxidizing medium is stronger than the others of this class. Sodium nitrite (0.4 to 2.7%, depending on the depth of shade) is used along with sulphuric acid (1 to 1¼ oz. per gallon). Treat for ½ to 1 hour at 100 F, rinse, neutralize, rinse. Indigosol OR has similar properties. These dyes are never used in combination with the others.

The other leuco vat esters, of which there are about two dozen, have a wide range of shade with good fastness properties. They can be dyed neutral (pH 7.0) with Glauber's or common salt 15 to 25% at 185 F; but for best all-around fastness it is better to start

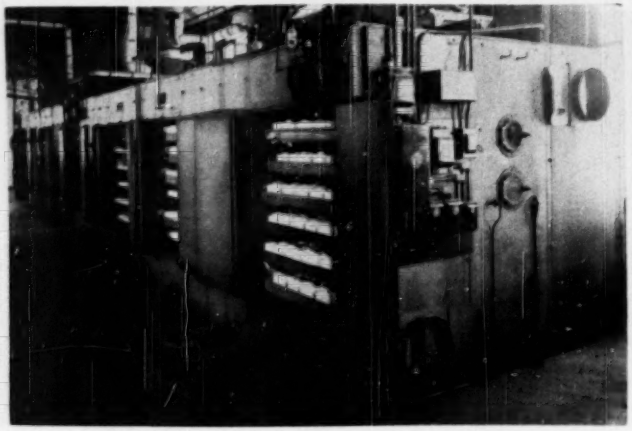


Obermaier-Steinen Worsted Package Dyer

Like the raw stock and spindle system top dyeing machines produced by this equipment manufacturer, the Model N U A K O stainless steel machine for the dyeing of worsted yarn packages consists of a dye kier with a self-balancing cover connected to a separate dyestuff feeding and heating chamber.

The yarn is wound on standard dye tubes or springs and placed on the spindles of the material carrier. The propeller circulation system provides full flow at temperatures near the boiling point, according to the manufacturer. Low pressure operation is said to prevent felting and chanelling.

Courtesy, Standard Fabricators, Inc.



Package Yarn Drying Machinery

The principle of operation of this Proctor package yarn dryer is such that moisture is evenly removed throughout the "solid" packages of dyed yarn.

Conditioned air is impinged on the packages in such a manner that the vapor pressure inside each package is raised to a point where the moisture is forced to the outside surface. While evaporation of this moisture is taking place, the outside layers of yarn are being constantly "bathed" in conditioned air containing enough moisture to prevent overdrying.

Another interesting feature is the automatic air flow reverser which automatically reverses the direction of flow of air at timed intervals so that the air impinges on the packages alternately, first from one direction and then the opposite.

Courtesy, Proctor & Schwartz, Inc.

the dyeing at 120 F, slowly bring it to a boil during 60 minutes and boil some of them as much as 40 minutes to get full exhaust or evenness. From 2 to 10% ammonium sulphate may be used as a dyeing assistant, and in a few cases up to 3% acetic acid is used after reaching the boil to get full exhaust, but these are exceptional. Exhaust curves of individual dyes and of radically different members in combination indicate that this temperature control method results in the most uniform work.

Dyebath exhaust can be watched by oxidizing a small portion with nitrous acid. The dyeings are colorless or only slightly tinted, and as the full shade does not develop until oxidized, shade matching is a little difficult. A quick, strong oxidation of a small sample from the lot can be performed, but this does not always look like the finished lot. However, the two can be correlated and the experience derived will indicate the use of this to the dyer. The formulas repeat so well that once a shade has been established, matching should be even less difficult than with top-chrome dyeings.

Some of the colors are easy to oxidize, others are more difficult; but for the wool dyer a uniform method that works well under most conditions has been developed. After the dyeing is rinsed, the machine is filled with cold water, sulphuric acid at an average of 1¼ oz. per gallon is added; then bichromate of soda or potash (a minimum of 0.7% to a maximum of 3.0%) is added; and finally 1 to 3% (2% average) of ammonium sulphocyanate is included to prevent over-oxidation and the depositing of dulling chrome oxides. The temperature is raised to 185 F and kept there for 30 minutes. The oxidation must be as completely and carefully done as the dyeings; underdeveloped dyeings will change on exposure to sun or ultra-violet light due to further development of shade. The wool is then neutralized with 2% soda ash (which should bring the pH to about 5.0), rinsed, extracted and dried.

This class of dyes has been successfully used on raw stock, slubbing, and yarn. Blankets dyed with them can be fulled, washed, and even bleached without bleeding or loss in shade. For knitting yarns and high quality goods, these dyes provide the most uniform and easily controlled method of applying colors of vat fastness.

THE END

Maintenance of Woolen Cards

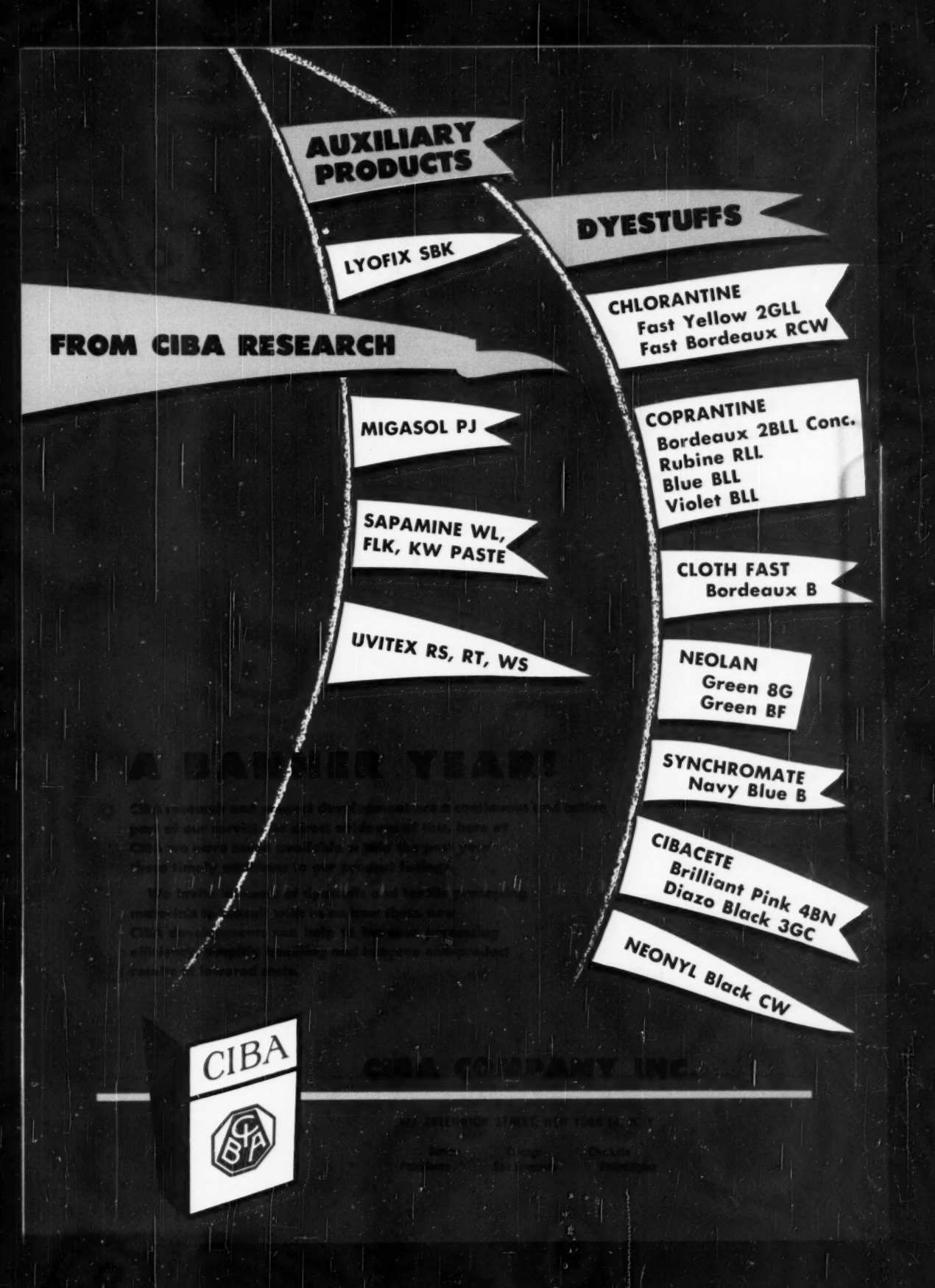
(Continued from page 94)

can be treated in the same manner.

If the main card drives on a three-cylinder card are leather belting, it is economical to put new belts on the double finisher and move the used belts to the single first breaker which requires less power. In the case of four-cylinder cards the used belts from the main drives will give satisfactory service on the side drives connecting the two cylinders on double first breaker and double finisher. Used five-inch belting can be ripped on a circular saw and converted into either two belts 2½ inches wide or made into one two-inch and one three-inch belt for use on the many light card drives. Used belting, if in fair condition, can also be utilized for covering card pulleys where leather covers are essential.

Extracting oil from leather belting leaves the leather hard and stiff. Cementing a single ply of new leather to a used belt is unsatisfactory; the new leather stretches more and separates from the old belting.

(Continued next issue)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Fast Yellow 2GLL
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COPRANTINE
Bordeaux 2BLL Conc.
Rubine RLL
Blue BLL
Violet BLL
CLOTH FAST
Bordeaux B
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Dyeing Barber - Colman Cheeses

By T. H. JACKSON*
Canadian Cottons, Ltd.

THE STANDARD wind of the Barber-Colman spooler is used to wind the stainless steel cores for dyeing, no special wind being required.

The density of the yarn on the Barber-Colman cheeses can be varied quite easily by reducing the winding speed and by using lighter presser-lever springs.

It has been generally assumed by most mills that have dyed Barber-Colman cheeses that a soft cheese would be more sucessfully dyed, and so started operations using a slower winding speed and lighter presser-lever springs, but after some experience with dyeing these cheeses, they have returned to the standard speed of wind of 1200 yards per minute and the standard presser-lever springs.

It has been the general experience that the standard wound cheese at the normal speed will dye quite successfully on modern dye machines with much less disturbance of the yarn than those wound at a slower speed and lighter presser-lever springs.

Advantages. The yarn, after being wound onto the Barber-Colman cheese, requires either warping to a slasher beam or pirning to a filling bobbin, so that these operations are a necessity, therefore a dyed Barber-Colman cheese saves in the case of warp dyeing, the winding onto ball warps, and after dyeing, the subsequent beaming. This eliminates two relatively low productive and high cost operations.

Large yardages can be dyed, which enables the subsequent warping to accommodate the required number of ends for any desired pattern. The yarn, after being dyed and dried on the Barber-Colman cheese is much less strained or stretched than skein or chain dyed yarn and can be warped just as easily as the undyed yarn using the same high speeds, and it has been the general experience that the yarn possesses better weaving qualities than that dyed by the older methods of chain or skein dyeing.

An adequate volume of clean soft-water, preferably with a low electrolyte content is the most essential requirement for successful dyeing results. Like all types of dyeing in which the liquor flows through the material to be dyed, all suspended or insoluble matter will be trapped to the yarn, with subsequent poor warping or back winding of the yarn.

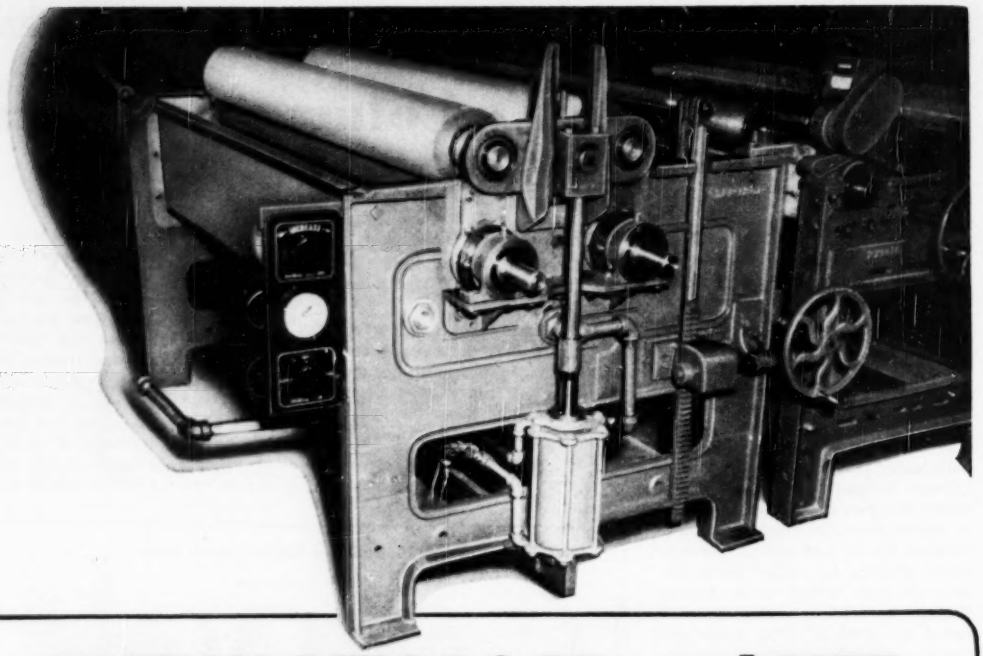
The colors used must be selected with due care paid to their levelness of dyeing in mixtures and also to their lack of migration during the drying process. In the present day machines, the liquor ratio is relatively quite high even under the most favorable load conditions of 10 to 1 and is often much higher if only half a load or less is required which does

*Abstract of paper presented at the Second Canadian Seminar.

Chemical Properties of Certain Textile Fibres

Chemical Property	Textile Fibre				
	Cotton	Wool	Viscose Rayon	Acetate Rayon	Nylon
Action of Acids	Sensitive to most acids which catalyze the hydrolysis of cellulose thus rupturing the molecular chains. Rate of degradation faster with strong acids and is also accelerated by heat	Fairly resistant to acids but is attacked by strong acids particularly at high temperatures.	Similar to action of acids on cotton.	Similar to action of acids on cotton. Soluble in glacial acetic acid.	Attacked by concentrated mineral acids and by phenols.
Action of Alkalies	Fairly resistant to weak alkalies. Swells considerably in strong alkaline solutions and with caustic soda alkali cellulose is formed. Very susceptible to oxidation in presence of strong alkalies.	Very sensitive particularly to strong alkalies which promote hydrolysis of molecular chains.	Similar to action of alkalies on cotton. Will dissolve in certain strong alkalies at low temperatures.	Attacked by alkalies with hydrolysis to produce regenerated cellulose. Rate increases with concentration of alkali and rise in temperature.	Resistant to alkalies.
Affinity for Dyes	Possesses affinity for Direct, Sulphur, Azoic, Vat, Basic (with mordant) dyes.	Possesses affinity for Acid, Chrome, Metallized, Basic, Soluble Acetate, Some Direct& Vat and Azoic dyes.	Possesses affinity for Direct, Sulphur, Azoic, Vat, Basic (with mordant) dyes.	Possesses affinity for Soluble and Dispersed Acetate Dyes, Basic, Some Vat, Azoic, and Acid Dyes.	Possesses affinity for Acid, Chrome, Metallized, Acetate, Some Vat, Azoic Direct dyes.
Effect of Reducing Agents	Fairly resistant.	Fairly resistant.	Fairly resistant.	Fairly resistant.	Fairly resistant.
Effect of Light	Gradually degraded.	Slightly affected.	Gradually degraded Bright yarn more resistant than dull.	Gradually degraded	Gradually degraded. Bright yarn more resistnat than dull.
Moths and Microorganisms	Not attacked by moths. Attacked by microorganisms.	Attacked by moths and microorganisms.	Similar to cotton.	Similar to cotton but much more resistant to microorganisms.	Resistant to moths and microorganisms.
Effect of Heat	Below about 140°C. little change produced by heating for a few hours. At higher temperatures degradation is more rapid. Rate of damage accelerated by increasing humidity.	Prolonged exposure to dry heat particularly at high temperatures damages the fibre. Damage is more pronounced with moist heat.	Similar to cotton. Increasing humidity accelerates rate of degradation.	Similar to cotton but rate of degradation is less affected by humidity than cotton or viscose rayon.	Will withstand heat at fairly high temperatures for very short periods. Increasing temperatures, humidity and time of exposure accelerates rate of degradation.
Flammability	Will burn and will support spread of a flame.	Fibre will burn but will not support combustion.	Similar to cotton.	Relatively non-flammable, but fibre will burn.	Will burn but does not support spread of a flame. Much less flammable than cotton or rayon.
Action of Solvents	Unaffected by common solvents.	Unaffected by common solvents.	Unaffected by common solvents.	Unaffected by many common solvents. Soluble in acetone, and chloroform.	Unaffected by common solvents.
Action of Chlorine	Not appreciably attacked if treated under controlled conditions.	Rapidly attacked. Reduces tendency to felting.	Similar to cotton.	Similar to cotton.	Attacked by free chlorine.

Prepared by M. L. Staples, York Knitting Mills, Ltd.



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not enable economical production with some classes of colors.

Using our methods of operation, there is a certain loss of dyed yarn, from 1000 to 2000 yards that is not wound off the stainless steel cores, due to starters being required for subsequent winding, and means have to be adopted to find uses for this dyed yarn. We have used the most of our dyed spare yarn by re-winding on the "tailing machine" and dyeing the multi-colored cheeses a deep sulphur black. A certain amount of these dyed starters can be used and the dye stripped from them before re-dyeing, but we have found that this stripped, re-dyed yarn does not process nor weave very satisfactorily compared with the original dyed yarn.

The yarn on the carrier, after dyeing, etc., is extracted on a vacuum extractor to approximately double the original air dry weight. They are then dried on a port of a 4-port enclosed hot air dryer, through which heated air at a controlled temperature is forced through the cheeses and a much lower velocity heated air stream is circulated around the outside of the cheeses and then vented to the atmosphere. A fully loaded carrier can be dried at a temperature of 260 F in 8 hours.

The two Barber-Colman dyeing machines have been used for the dyeing of cotton for warp and filling, and we have used direct, direct after-treated and developed, sulphur, vat, and naphthol colors.

Since the installation of the machines, we have vat dyed our greens, blues, etc., required for solid and striped awnings, by the pigment and subsequent reduction method, with very level and even results throughout the cheeses. To date, we have not had occasion to use the reduced method, or other variants of the pigment method since we have found that the use of vat pastes or water dispersible powders has given excellent results in penetration and levelness.

The yarn is thoroughly scoured with 1% caustic soda, 0.5% penetrant, pigmented for 20-30 mins. at 180 F, using a leveling agent at the lowest operating water level of the machine, then cooled down by the addition of cold water and the required amount of caustic soda, circulated for 10 minutes, then added the required amount of sodium hydrosulphite in several 5 minute additions, circulated for 30 minutes, sampled, washed with fresh cold water to the sewer till free from alkali, and oxidized with 1% hydrogen peroxide— 100 vol., added to a cold bath, raised to 180 F then added: 1% soap chips, raise to 200F, circulate for 20 minutes, 2 hot rinses at 140F for 10 minutes each.

Departmental Cost Report

By B. F. BESWICK
Dominion Textile Co., Ltd.

"Textile Industries" Abstract

A GOOD REPORT is a tool of good management and evidence of good management. Attention should be paid to the form and composition, having regard to the limitations of the reader and the object of the report.

Factors which facilitate report reading are: special sizes and colors of paper, special type, column tabulations, title headings, item descriptions, special markings, ratios and averages, graphs and curves, summaries, and footnotes.

Some reports contain over-abundance of detail and tend to place equal emphasis on all factors regardless of their relative importance. Much valuable time is thus wasted in the review of insignificant data at risk of loss of important points.

Modern business uses a reporting known as the "exception principle" which reports off-standard conditions only, ignoring standard conditions; this permits concentration upon conditions which require attention.

The departmental head should participate in the selection of operating data for report purposes and should familiarize himself with the various systems of reporting. He should make sure that the information required is necessary and not already available in some other form which may be adapted for this purpose. The cost of preparation must justify the benefit received.

PRESENTED here on pages 121, 123, 125, and 127 are abstracts and/or extracts of ten other papers delivered before the Second Canadian Textile Seminar. A feature story on the Seminar, along with several of the addresses given, appeared on pages 94-97 of the November, 1950, issue.

Length of the papers precludes publishing them in full. All of the papers presented at the Seminar are now available in book form from the Secretary of the Textile Technical Federation of Canada, 1420 Sherbrooke St., West, Montreal, P. Q. Canada.

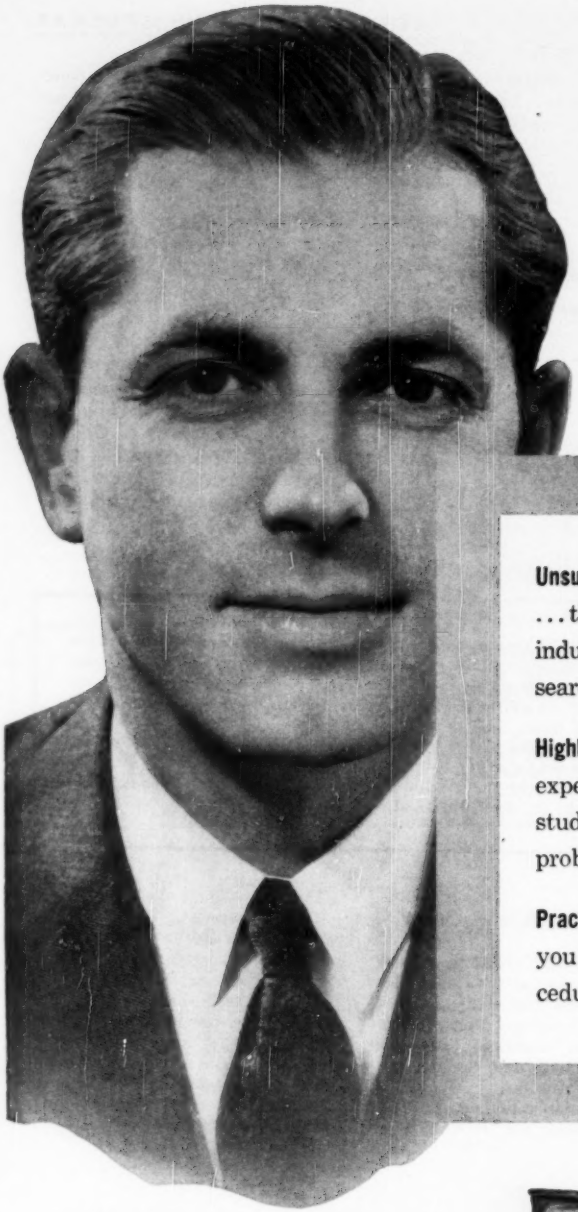
Manufacturing Controls for Textile Mills

By RUDOLPH ASHNER
Werner Textile Consultants and P. O. M. Co.

"Textile Industries" Abstract

THERE is no one formula to achieve full manufacturing controls. When objectives are known, controls must indicate immediate warning to management when deviations from standards occur, and the system must allow for quick correction of the deviations.

Standards in manufacturing concern raw material, production methods, quality, waste, maintenance, supply, working methods, labor, and



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Highly skilled technical service...widely experienced men make on-the-spot studies concerning your production problems.

Practical engineering service... to help you apply new methods, new procedures, in your production.

These service links can be extremely valuable to you in your various production problems ... to help you make better textiles more efficiently and economically with such uniform quality products as:

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cost. A properly designed control panel would show management at all times whether the mill is running according to plans—production, quality, sales, and cost, thereby relieving management of constant attention on all operations.

Such a control plan can be set up in any kind or any size mill, often without additional cost. As an aid to the supervisor, for example, the control plan would relieve the departmental overseer from checking his waste extraction or speeds; this would be done by the control organization, permitting overseer to perform other duties. However, the control department would advise the overseer of discrepancies, which he in turn would correct.

Installation of system of mill control: Set standards and tolerances which affect quality and cost; organize a control and testing program; design forms for control records; define administrative routines; introduce exact testing and checking procedures.

Processing Characteristics of Crimp-Set Nylon Staple

By H. GARNER
Canadian Industries Limited
Nylon Division

"Textile Industries" Extract

NYLON STAPLE can be modified by crimp setting; this results in a fiber that is easier to process on conventional spinning machines.

On the cotton system low licker-in speeds are necessary and a fancy roller is essential. Roving twist must be kept low.

Acceptable methods are to use a Bramwell feed to a roller top card, or to use pin-drafted sliver. The latter method is specially suited to modified cotton equipment or the American worsted system.

Difficulty in carding on woolen cards can usually be overcome by adjustment to the setting and speed of the fancy rollers. Closer and more accurate settings of other parts are also necessary.

On the Bradford system the problem of spinning even yarn can be overcome by obtaining the correct balance of twist at each machine. Twist is critical; it is much simpler to use a pin-drafted sliver which can be introduced at the reducer.

Quick Method for Testing Nep Content (Wool)

By WATSON J. WOOD
Demetre, Sault & Ciriez, Ltd.

"Textile Industries" Extract

TAKE a "draw" from the sample top which has been examined in the usual manner. If average fiber length appears all right, check for nep content as follows:

Take total of 20 draws from the top, four from outside, four from center, four from inside middle, and four from any two reverse ends. Count number of neps in each draw; weigh draws together for total weight. If find a total of 30 neps for 20 draws, would have 30 for a given weight of top. From this the average number of neps contained in an average yard of top can easily be calculated to neps per pound.

There should not be any large neps. We allow as our standard, three small neps average per two draws when the sliver weighs three ounces for five yards. On double-combed tops, no more than half that number average per draw, and usually the same number for recombed tops.

Procedure continues by taking draw from outside of top. Lay out fibers on a blackboard, placing each alternate draw to produce an array. Regular blackboard analysis is then used. Crimp is noted; kemps if present are counted, and other observations are made.

Then holding the fibers down with one hand, they may be stretched to their full lengths with the free hand; on a good velvet board they will remain in such a position for some time. Next trace, with pipe-clay chalk, the tips of the various fiber lengths. Then the outline of the fiber lengths is transferred in exact replica to transparent paper which is ruled and measured.

Observations are then recorded. Master charts for each quality or blend are kept, with performance particulars recorded.

By placing a new chart (transparent) over a master chart, any irregularity or diversion from the original is apparent.

Bonded Fabrics

By C. E. COKE
Courtaulds (Canada) Limited

"Textile Industries" Extract

THE PHYSICAL characteristics of bonded fabrics (non-woven) vary as widely as those of woven fabrics and are usually determined by the end use.

Weight. Most bonded fabrics vary in weight between .4 and 8 ounces per square yard; any heavier weight can be made.

Thickness. Thin fabric is made by calendering; vary from thickness of sheet of paper upward.

Strength. Dry strength in fiber direction is relatively good; strength across the fibers is poor. Wet strength relatively poor.

Tear Resistance. Generally poor in comparison with woven fabric.

Abrasion Resistance. Relatively poor compared with woven fabrics; however, for disposable end uses the abrasion resistance is not important.

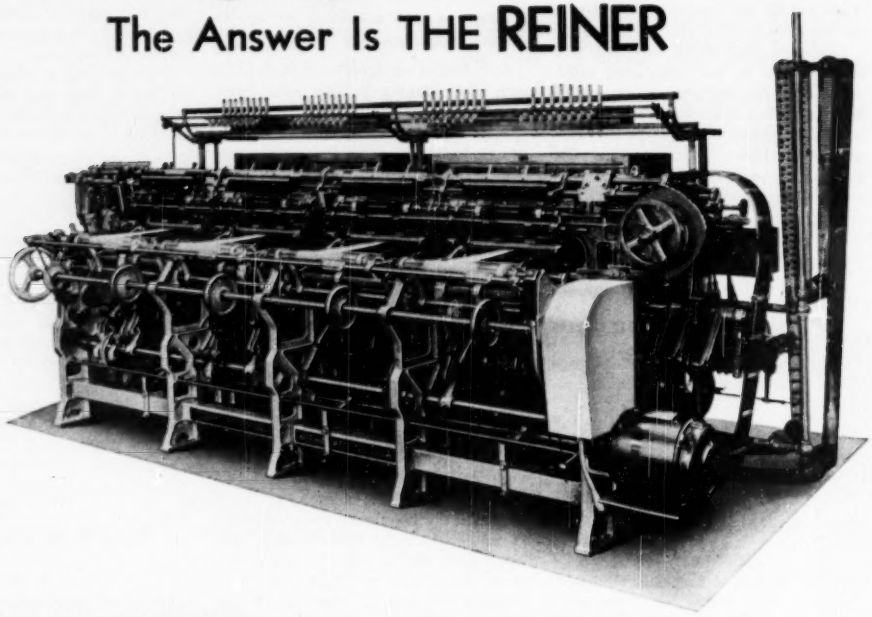
Porosity. Can be varied in the manufacturing process over a wide range and controlled within close limits.

Launderability. Only necessary to soak in soapy water, rinse, and squeeze dry.

Dry Cleaning. For certain uses

For Finest Gauges

The Answer Is THE REINER



TWIN KNITTER up to 66 Gauge

Whether you require 25 dozen or 2,500 dozen additional weekly production, you can get top hosiery production of clear fabrics and stitch formation with one unit or a battery of these super-efficient machines.

This statement is based on close observation of Reiner Twin Knitters installed by many outstanding manufacturers and their reports on finest gauge production obtained.

AUTOMATIC OPERATION of the Reiner Twin Knitter assures minimum handling by the operator and adaptability to any operating system.

USERS REPORT top production, up to the finest gauges, without the necessity of costly air conditioning, and stress economy of operation and maintenance.

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LACE (PERFORATING) ATTACHMENTS — FANCY HEEL ATTACHMENTS — COLORED HEEL ATTACHMENTS — RINGLESS ATTACHMENTS — UP TO EIGHT CARRIERS — 15" NEEDLE BAR.

Machines are delivered fully assembled, ready for immediate use, thereby avoiding erection delays and hazards.

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10 MINUTES FROM TIMES SQUARE. Take Bus Nos. 61, 67, 167 from the Times Square Public Service Terminal at 260 West 42nd Street, New York City. Get off at Pleasant Avenue, Weehawken, New Jersey. From there turn left and walk through the underpass up to Gregory Avenue . . . TELEPHONE, UNION 7-0502, 0503, 0504, and 0505. From New York City call LONGACRE 4-6882.

bonded fabrics must withstand dry cleaning; therefore in this application bonding agents of a type insoluble in dry cleaning solvents and in water are employed.

Fire Retardancy. Can be conferred on bonded fabrics as on woven fabrics.

Principles of Carding

By ANDRE VARGA
Consultant

(Extracts from Mr. Varga's address. Remarks deal mainly with roller card, but principles may apply to flat card.)

BY DYEING one end of a tuft of stock red and processing the stock through the card I could distinguish the two ends of the fiber from one another.

Tufts, locks, and fibers which lie at random in the lap are brought into alignment lengthwise in the course of their passage from the feed roll to the cylinder.

Carding will be more efficient and intense: (1) if more of the lock is peeled away and held by the worker (2) the longer the time during which the worker's share of stock is kept exposed to the combing action of the cylinder wires, and (3) the greater the friction that is generated between fibers and the combing wires of the cylinder and the greater the density of the wire-ends.

By increasing the worker speed we can reduce the duration of the combing phase. The worker speed can be increased sufficiently to allow time only for the peeling off of the top layer to take place because right away the worker's share is lifted out of reach of the cylinder. There will be no time left for combing. Slowing down of worker speed will have the opposite effect.

Time Study and the Supervisor

By RALPH PRESGRAVE
Vice-President
Kroy Unshrinkable Wools Ltd.

"Textile Industries" Abstract

NO TECHNIQUE of modern management has done so much to raise wages without raising costs as a thorough understanding and application of wage incentive principles supported by sound time study and motion study. The foreman must understand the principles.

If the foreman truly sees himself as a part of management he will realize that the presence of the industrial engineer and the things he does are really his opportunity to prove his ability to get things done through others better than he could do them himself; in short to prove his ability to manage. If the foreman regards the industrial engineer as a usurper and the things he does only as an invasion of his territory, the foreman will sell himself short. Without being a time study expert, the foreman needs to know what time study can do for him; he should regard time study as a tool.

There are only two reasons for an operative not meeting production standards: either he is basically not the right man for the job or else he has not been properly trained. Thus an operator's failure to achieve the standards required may lead a foreman to a study of his own responsibilities in placement and teaching.

Reasons for departmental and operator inefficiency: improper flow of materials (due to own or preceding departments), substandard materials, poor machinery or maintenance of same. Such discrepancies may be brought to light in time study work.

A major responsibility of the foreman is to know or determine the precise manner in which each job should be done; often the foreman is unable to do this because he may not be sure about the most effective motions that a job requires; work with time study men may develop the most economical way to perform an operation, consistent with quality.

One of the foreman's jobs is to check on cases where earnings become unduly high because of changing conditions. A loose rate in the long run causes more trouble than the tight rate. A tight rate annoys only the man working on it and it is easy to correct; a loose rate is a matter of satisfaction to the operator, even though it annoys all the others.

Sliver Testers in Worsted

By F. E. CLEYN
Spinners Limited

"Textile Industries" Extract

THE MECHANICAL measurement of imperfections in the worsted sliver has been a tremendous advancement and will enable the spinner to make close studies of various theories. Properly applied it is bound to result in a marked improvement in quality and a reduction in the number of operations.

The evaluation of an evenness diagram is most important, and obviously comparisons are possible only if the same method of evaluation has been used.

Tentative figures on evenness have been established for our plant, using the Uster tester, with the figures being arrived at with a planimeter:

Tops	4 to 5.5%
First gilling	3 to 4.5%
Second gilling	2 to 3%
First drawing	1.8 to 2.8%
Second drawing	1.5 to 2.5%
Third drawing	1.4 to 2%
Reducing	2.5 to 2.9%
Roving	4 to 5%

STA Convention Date and Location Announced

The Southern Textile Association will hold its 1951 convention at the Mayview Manor, Blowing Rock, N. C., June 21-23, 1951.

The Outlook for Cotton

With the short 1950 crop, there is bound to be a lot of grading down in cotton requirements.

By RINGGOLD ARDEN

THE SHORT CROP of cotton produced in the United States this season is causing some serious problems that the cotton mills must meet, and these problems will probably become aggravated before the 1951 crop can be gathered. It seems that there will probably be enough cotton to take care of the American mills, but the least said about the quality of some of this lint, the better.

One of the most immediate effects of the short crop is going to be the difficulty in getting the kind of cotton the individual mill management thinks it needs. There is bound to be a lot of grading down in cotton requirements.

The mill which has always used Strict Middling cotton will have to use mixtures of Strict Middling and Middling, and the spinner who wants Middling cotton will probably be obliged to mix a lot of Strict Low Middling with what Middling staple he can get. This grading down will be quite a headache to mills that do not have modern opening, picking, and cleaning rooms, or those having too few cards, even if their preparatory equipment is pretty well up-to-date. Fortunately, most mills seem to have spent a good deal of money and effort to get their cleaning machinery improved during the past few years, and there will probably be a rush on the part of other cotton manufacturers to put in improved cleaning equipment as the cotton squeeze progresses.

Cases have been called to our attention where mill superintendents had set aside bales that did not come up to grade, but instead of these being rejected, the managements were later glad to get cotton that good to put in the mix.

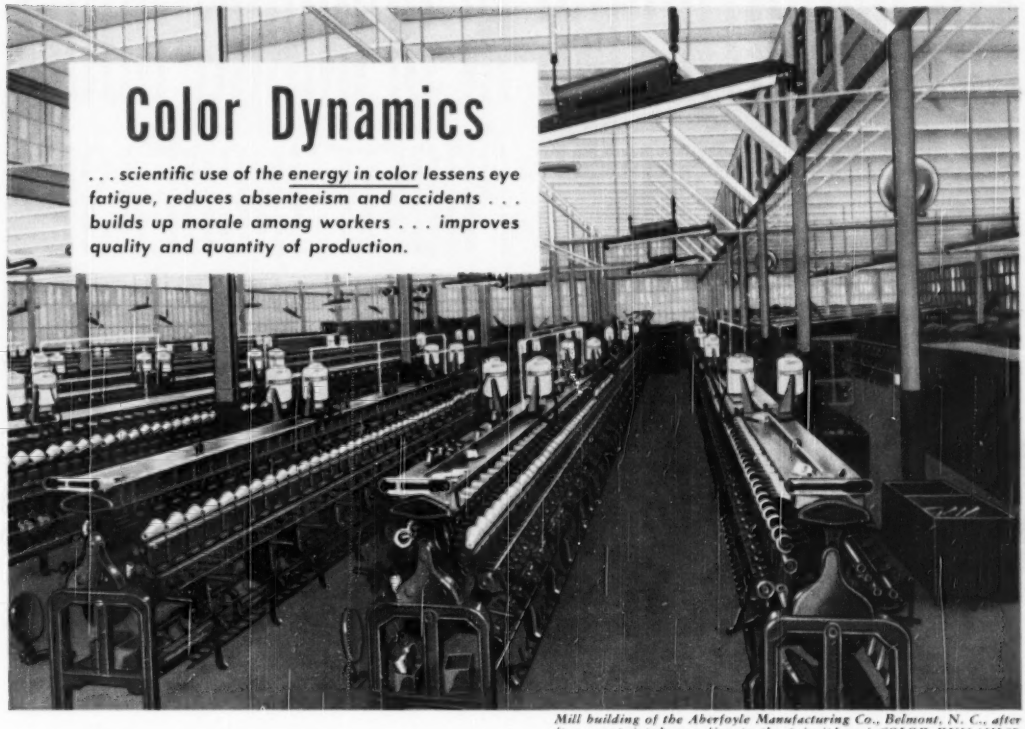
The United States mills will consume more cotton during the next year than the amount of the current crop, and the government authorities who were discouraging the production of cotton a few months ago and worrying about surplus, are now begging the farmers to plan on a thumping big crop next year. Whether the farmers will, or can, produce a 15 or 16 million bale crop is a debatable question. The unusually large 1949 crop was not just a question of acreage, but a matter of remarkably good weather conditions, which may not be repeated soon. This year the Texas crop was seriously damaged by an unusually rainy season, and unless fortunate weather conditions obtain, there is hardly any chance of another big crop of cotton.

Anyone who has driven an automobile extensively through the old cotton belt of South Carolina, Georgia, Alabama, and Mississippi will realize that millions of acres have been taken away from King Cotton's domain permanently. Large sections of Alabama and Mississippi which used to be considered fit only for cotton growing, now raise practically no cotton, but beautiful rolling pasture lands covered with lush greenery greet the eye on either side of hundreds of miles of good paved roads, where only sandy ruts through worn-out cotton country could be found 25 years ago.

No man in his right mind is going to plow up good pasture land like this to plant cotton. In Georgia, peanuts and tobacco have largely taken over the land once devoted to cotton, and not now converted to cattle. Most of the land which was any good, and which has been taken away from cotton in the old southeastern cotton belt, is probably gone for good. It took a lot of labor to raise cotton in these southeastern states, and under the New Dispensation, with a guaranteed living in town on relief, the old cotton-growing labor is getting scarcer and scarcer in the country.

In the flat cotton lands of Mississippi, Arkansas, Texas, and California, mechanized farming, built principally around the mechanical cotton picker, will probably make cotton a profitable crop for a long time to come. Oddly enough, the mechanical cotton picker has, so far, done very little to reduce the cost of picking cotton, although it has probably picked a lot of it that would otherwise have gone to ruin if hand-picking had been depended upon. In Texas in 1949 the usual rate for hand-picking cotton was $3.00 a hundred, and a lot of lucky people who had been able to get hold of mechanical cotton pickers were charging $2.75 a hundred, according to reports from some of our readers. As more of these cotton pickers are built, this cost will undoubtedly come down, since two men with a cotton picker can gather as much cotton as about 75 hand pickers.

The big problem in expanding cotton acreage in the western states is mostly irrigation. California has come to the front with a rush as a cotton producing state. Just a few years ago, a negligible amount of cotton was produced in


Color Dynamics
. . . scientific use of the energy in color lessens eye fatigue, reduces absenteeism and accidents . . . builds up morale among workers . . . improves quality and quantity of production.

Mill building of the Aberfoyle Manufacturing Co., Belmont, N. C., after it was repainted according to the principles of COLOR DYNAMICS.

Pittsburgh's New Painting System Benefits Workers and Management Alike in Aberfoyle Mills' Plant!

IT IS not surprising that production executives and workers alike have expressed great interest in Pittsburgh's COLOR DYNAMICS.

This new method of painting is based upon the scientific fact that the *energy in color* has a definite influence upon the physical, mental and nervous systems of human beings.

Actual experiences have shown that in plants which utilize Pittsburgh COLOR DYNAMICS both labor and management have benefited. Continuity of employment is increased, efficiency of operation is improved. Quality and quantity of production are maintained at high levels.

Characteristic of the benefits produced by the painting system of COLOR DYNAMICS are the results in the plant of the Aberfoyle Manufacturing Company of Belmont, N. C.

"We painted our mill buildings according to your principles of COLOR DYNAMICS," writes W. H. Crenshaw, plant manager. "Such use of specific colors has many advantages. It is helping us to maintain higher employee morale, a good safety record and efficient, improved production throughout our organization."

Hundreds of plants in many industries have enjoyed similar experiences in recent years. Where these principles have been applied, workers' eye fatigue has been lessened. Absenteeism and the risk of accidents have been reduced. *More work per man-hour and more man-hours per man have resulted.*

You Can Obtain a COLOR DYNAMICS Engineering Study of Your Plant — FREE!

Your plant may need Pittsburgh COLOR DYNAMICS. Why not try this new painting system on a machine or two—or in one department? We'll be glad to make a scientific color engineering study for you FREE and without obligation.

There's a trained color expert at each of our offices located in all principal cities. Call your nearest Pittsburgh Plate Glass Company branch and arrange to have our COLOR DYNAMICS representative see you at your convenience. Or send the coupon below.

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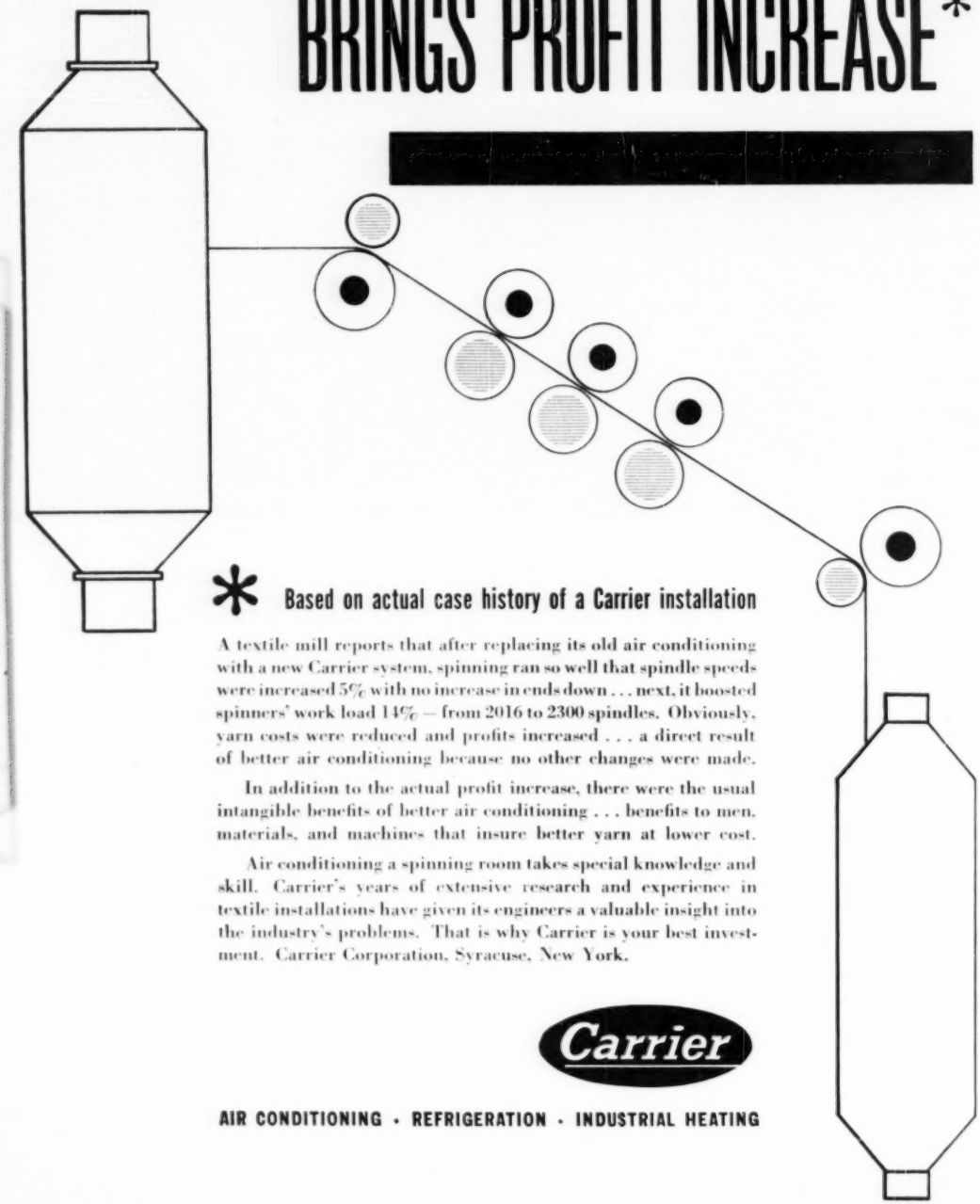
AIR CONDITIONING IN SPINNING ROOM BRINGS PROFIT INCREASE*



* **Based on actual case history of a Carrier installation**

A textile mill reports that after replacing its old air conditioning with a new Carrier system, spinning ran so well that spindle speeds were increased 5% with no increase in ends down . . . next, it boosted spinners' work load 14% — from 2016 to 2300 spindles. Obviously, yarn costs were reduced and profits increased . . . a direct result of better air conditioning because no other changes were made.

In addition to the actual profit increase, there were the usual intangible benefits of better air conditioning . . . benefits to men, materials, and machines that insure better yarn at lower cost.

Air conditioning a spinning room takes special knowledge and skill. Carrier's years of extensive research and experience in textile installations have given its engineers a valuable insight into the industry's problems. That is why Carrier is your best investment. Carrier Corporation, Syracuse, New York.

Carrier

AIR CONDITIONING • REFRIGERATION • INDUSTRIAL HEATING

California, and now the production is around a million bales, and can be increased if water can be found. However, the tremendous increase in cotton acreage with the enormous increase in the amount of water required for irrigation, has resulted in overpumping, so that the water table has fallen alarmingly, and state or federal authorities are going to have to do something about its further depletion. Cotton as a latecomer among the state's agricultural products is likely to be the first thing cut off if limits are placed on the amount of water that can be pumped for irrigation.

The same situation seems to exist pretty generally in Arizona and West Texas. The water table in the Texas panhandle is said to have dropped tremendously in just a few years, and its low level is now a matter of grave concern.

WITH THE introduction of mass produced and mechanically harvested cotton, fresh problems have arisen in the ginning of the lint, and its processing in the cotton mills. Sledded cotton before ginning is a mass of frightful looking rubbish that the uninitiated would never associate with the fleecy lint in a typical cotton bale. Good hand-picked cotton will run about 1300 pounds of seed cotton to a 500-pound bale, while it sometimes takes 3500 to 4000 pounds of this sledded rubbish to turn out a 500-pound bale of lint.

Only about 25 years ago a cotton ginning outfit that cost eight or nine thousand dollars attracted pilgrims from many counties around to look it over, but now a ginning outfit is such a mass of hull separators, precleaners, dryers, and other gadgets that a gin outfit costing a hundred thousand dollars is not unusual. All of this, of course, greatly adds to the cost of ginning cotton, and unhappily adds to the trash that the spinning mills have to remove from the bales.

The gin manufacturers during the past few years have labored mightily to devise better methods of separating the rubbish from the lint, and they have done a spectacular job, but there is still an immense amount of little fine trash which is not too noticeable in the bale to the naked eye, but which is a frightful headache to the cotton spinner.

Every old-timer in a spinning mill realizes that cotton grades are nowhere near what they used to be. Cotton that is officially graded as Middling would hardly have been permitted inside a respectable mill 40 years ago, and would probably have been graded Strict Low Middling to Low Middling by the standards of that time.

The kind of trash that gives the most trouble today in the spinning mill was simply nonexistent in the cotton bales of 40 years ago. Hand-picked cotton just did not have any of that sort of stuff in it. The trash which affected the grades of cotton was mostly large leaf in cotton of Strict Low Middling grade or better. Today cotton with little visible leaf trash is full of little, fine, ground up stuff which is left from the ton or more of bolls, bract, bark, twigs, leaf stems, and other rubbish in addition to the leaves themselves.

This mechanically harvested cotton is often much neppier than the old hand-picked lint of years ago, and the ginners and manufacturers of textile cleaning machinery are constantly struggling to develop equipment for taking out this neppy material. Gin manufacturers are dreaming of the day when they can turn out a sample from mechanically picked cotton that will show up as well as one from hand-picked lint, gathered in the old-fashioned manner and not snapped, as is so frequently the so-called hand-picked cotton today.

Cotton's present principal competitor is rayon, and many persons have seriously prophesied that in time cotton, as a natural fiber, will disappear in favor of laboratory controlled synthetics. Certainly, rayon production in the United States has progressed at a fabulous rate. Twenty-five years ago the entire production of rayon in this country was about 100,000 bales, and now the production is up around two and a quarter million bales.

This production may not be increased much in the next few years, on account of the present tremendous cost of a new rayon plant. We had a report recently that one of the rayon producers had just planned a new plant and found that it would cost more than four times as much as the same plant would have cost ten years ago. If the demand for rayon remains strong enough to assure production, regardless of the cost of a new plant, new rayon plants will undoubtedly be built.

The tire companies have seemed to be pretty well set on extending the use of rayon tires, although some authorities on this subject claim that cotton tires are superior for passenger car use, and that there is nothing to recommend rayon except its cheapness as compared with high-priced cotton. If this is true, it may not remain so, because at any time new and unexpected improvements or discoveries may provide us with a synthetic tire fabric unquestionably superior to anything now in use. Synthetic fiber producers are always working with new developments, and any day new fibers may be put in production to further displace cotton.

Insofar as staple fibers are concerned, the individual spinning mill can convert from cotton to synthetics or back again without very serious dislocation, and this will give considerable flexibility in case of wartime needs for shifting mills from synthetics to cotton where cotton is available.

If the price of cotton can be brought down to about the same price as rayon, that would probably do more to check increased production of rayon than anything else, because rayon is now a firmly established textile fiber and shifting styles are not likely to hurt it much. If cotton prices remain relatively high, as they probably will so long as farm prices are determined by politics rather than reality, a few hundred million extra pounds of rayon would probably find a ready market.

Then, when the next depression comes along, there will be too much cotton, as well as too much rayon, and too much everything. Just now there certainly isn't enough.

More Than 165,000 Spindles

OF H&B CASABLANCAS HI-DRAFT SPINNING SYSTEMS

THE SPRINGS COTTON MILLS

WOODSIDE MILLS

J. P. STEVENS & CO., INC.

ERWIN MILLS, INC.

Early in 1950 . . .

. . . the H & B American Machine Company announced the development of three new systems for high draft spinning.

All three were displayed and demonstrated at the American Textile Machinery Exhibition in Atlantic City. Viewed by thousands of trade representatives, the H & B exhibit proved to be a highlight of the show.

Since Then . . .

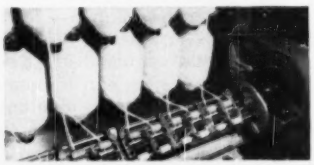
. . . four of the largest and best known mills in the country invested millions of dollars in new spinning equipment designed and built by H & B. For the Springs Cotton Mills and the Erwin Mills emphasis was placed on the H & B Casablancas Hi-Draft System, while installations at J. P. Stevens & Co. and the Woodside Mills are divided between Hi-Draft and the Casablancas S-3 System for synthetic fibers.

In addition, H & B has installed a large number of sample frames, as well as changeovers to these new systems, in other mills throughout the country.

And Now . . .

. . . looking back over the record, it is possible to say that the mill performance of the H & B Casablancas Systems for high drafting has proved that they are the most outstanding spinning systems on the market today.

For high drafts and high quality yarns — look to H & B. Complete details are available on request.



H & B CASABLANCAS HI-DRAFT SYSTEM
A 3-roll system with a set of double aprons. Features newly designed cap bars, weighting, roller stands, cradles and tensors. Adjustable roll settings and a better control of apron travel produce yarn of high quality in evenness and strength. Yarns made from single roving have proven highly successful. Extremely flexible drafting range from 24"-50". Handles staple fiber lengths up to 2".

H & B CASABLANCAS S-3 SYSTEM
For synthetics and blends on any fiber from 1" to 4". Three-roll system with double apron between first two lines. Features spring weighting, new type saddle and a cradle design with interchangeable platforms. Changeover from spinning one staple length to another made in a few minutes, without changing cradles, belts or roll settings. Drafting range 14"-40" with complete fiber control.

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Builders of MODERN TEXTILE MACHINERY

Rain-Grown vs. Irrigated Cotton

A Comparison of Dyeing Characteristics and Related Properties

*Winning Paper in the AATCC Intersectional Contest**

IRRIGATED cottons are sold at discount relative to comparable quality rain-grown cottons due, in part, to different dyeing characteristics of the two which tend to complicate wet finishing operations. Mill opinion that irrigated varieties dye lighter is substantiated experimentally.

Representative cottons of both species used in the investigation were practically identical in staple length, fineness (array and Micronaire), maturity (caustic soda method), and fiber strength (Pressley), although yarns made from the irrigated stock were stronger.

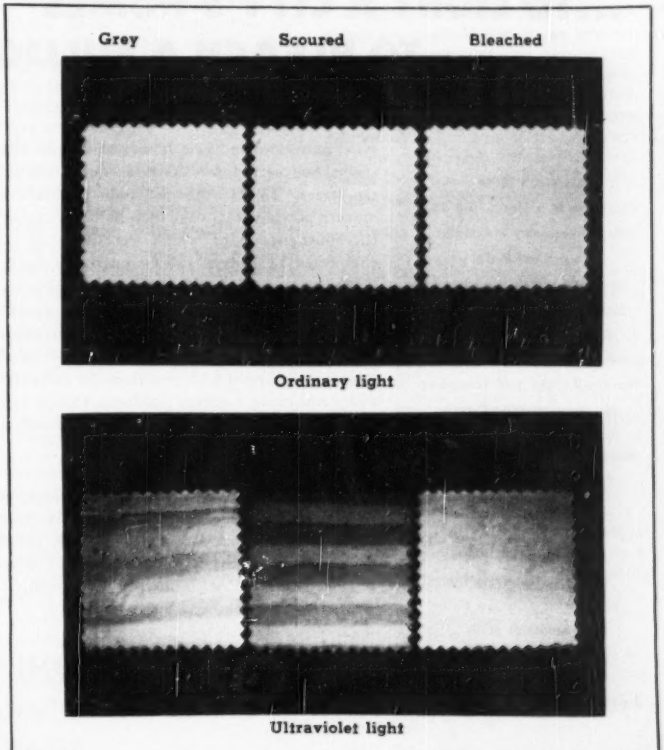
No differences are found in wax content or in acid-combining capacities, the latter being an indirect method for determining pectic substance content. Irrigated types exhibit higher values of ash content and hot-water-soluble materials. The amount of hot-water-soluble substances considerably exceed cold-water-solubles in irrigated cotton, the reverse being true in rain-grown cotton. This behavior influences raw cotton dyeing characteristics since the elevated temperatures of dyeing would result in greater amount of soluble non-cellulosic impurities in the irrigated cotton dyebath.

Sodium and potassium are two cations present in water soluble material and ash of both cottons. Calcium is found in ash of both but manganese only in irrigated cotton ash.

Chemical Properties. The fine structure of cellulose materials is one of the most important factors influencing behavior during wet processing. Penetration of dyestuffs occurs in the accessible amorphous regions of the structure while tightly packed crystalline portions are impervious to substances having even a smaller molecular size.

Degree of polymerization of rain-grown varieties is consistently higher than that of irrigated types, initially and after various physical and chemical treatments. It is believed that this factor is not significant in causing shade differences in cottons examined, since chemical treatment does not lower

SAMPLES OF KNIT TUBING that have been photographed under ordinary light (top) and ultraviolet (bottom). Note the light stripes in the samples on the lower panel; they are irrigated cotton yarns.



*Abstract of paper submitted by the Piedmont Section in the intersectional contest during the annual convention of the American Association of Textile Chemists and Colorists.

POWER
25,000 Kilowatt Turbo-Generator, City of Orlando, Florida.
15,000 Kilowatt Turbo-Generator, The Grace Bleachery Power Plant Springs Cotton Mills, Lancaster, S. C.

...TO LIGHT A CITY'S HOMES
...TO BLEACH A MILLION SHEETS

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Davenport Hosiery Mills
Dixie Mercerizing Co.
Goodyear Tire and Rubber Co.
Marshall Field and Company
Mt. Vernon-Woodberry Mills, Inc.
Muscogee Manufacturing Co.
Peerless Woolen Mills
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Standard Coosa Thatcher
Swift Spinning Mills
The B. F. Goodrich Co.
The Springs Cotton Mills
Thomaston Mills
United Merchants & Manufacturers, Inc.
West Point Manufacturing Co.

New industries and new homes have more than tripled Southern power consumption in the past ten years. To fill this demand, hundreds of modern power plants have been built throughout the South, scores of which were designed and engineered by Robert and Company Associates.

The power plant of the huge Grace Bleachery just completed at Lancaster, S. C., for the Springs Cotton Mills is an example of our power developments. Using pulverized coal, this modern plant, equipped with an automatic extraction and condensing turbine, produces 15,000 kilowatts per hour, enough to bleach and finish up to 5,000,000 yards of fabric per week.

In the power plant field, and in all types of industrial development, Robert and Company has had broad experience on virtually every type of project. As indicated by our partial list of clients at the left, our experience covers a large number of industries and many of America's great names.

POWER PLANTS

INDUSTRIAL PLANTS

TEXTILE MILLS

MUNICIPAL PLANNING

AIR CONDITIONING

MACHINERY & EQUIPMENT LAYOUTS

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ATLANTA

molecular chain length to a degree causing change in physical properties. Other accessibility evaluations (rate of attack by hydrochloric acid), and crystallinity measurement (ultimate extent of attack by 6 N hydrochloric acid), show no appreciable differences between the two types of cotton.

Dyeing Characteristics. Shade differences between irrigated and rain-grown cottons are not confined to any particular class of dyestuffs but include direct, vat, sulphur, and naphthol dyeings.

Amount of dye adsorbed by the two cottons under identical conditions is precisely equal as measured spectrophotometrically. This is confirmed by exhaust dyeings.

Photomicrographs of cross sections of the dyed fibers show substantially equal dye distribution. However, since the apparent differences in depth of shade of the two cottons minimize, disappear entirely, or even reverse with a change of viewing angle or illumination, it is evident that reflectance characteristics are markedly different. Mercerization, which alters reflectance properties, eliminates the shade difference. Optical measurement on the Hunter-Gardner Goniophotometer provides quantitative confirmation.

The only practical method of eliminating or minimizing dyeing differential between rain-grown and irrigated cotton is mercerization of both cottons in yarn or fabric form.

Odor Prevention in Resin Treated Fabrics

By L. A. FLUCK,
G. J. KEPPLER,
T. F. COOKE,
C. L. ZIMMERMAN
American Cyanamid Co.

TEXTILES that have been treated with thermosetting aminoplasts, such as urea and melamine-formaldehyde resins, develop unpleasant odors under certain conditions.

The longer the time available for reaction between formaldehyde and the ammonia salts, especially at higher temperatures, the more the tertiary amine formed. These amines are the cause of odor. They are formed by:

1. Reaction between the ammonium ion of ammonium salt catalysts and formaldehyde liberated from the resin during curing.
2. Reaction between ammonia liberated from either ammonium salt or the non-ammoniacal nitrogen containing catalysts and formaldehyde.
3. Decomposition of the non-ammoniacal nitrogen containing catalysts into odor producing amines.

Any of the following conditions may promote those reactions: drying in an atmosphere that is too humid; curing for too long a time; curing at too high a temperature; failing to give an alkaline wash after curing to promote volatilization of the free amine from the cloth.

Odor Prevention. The addition of a formaldehyde acceptor, such as urea or dicyandiamide, to the resin bath was found to prevent odor formation in the treated fabrics.

Addition of urea with ammonium sulfate catalyst prevents odors in a Permel Resin treated fabric. Addition of 10% urea will prevent odor formation in mixtures of Permel Resin and Aerotex Cream 450. It is extremely important to use urea in mixtures of Aerotex Resin M-3 and Aerotex Resin 160. Ammonium hydroxide is frequently added to impregnating baths to adjust the pH in order to prevent premature polymerization, but this will cause odors if the resin is cured at 350 F. A non-ammoniacal base such as triethanolamine is recommended.

Formates in a resin bath accelerate odor formation. Consequently, wax-aluminum salt, water repellents, gas fading agents or other materials containing formic acid or its salts should never be applied with any formaldehyde resin.

Fresh Aerotex Cream 450 heated at high temperatures does not produce fish odors, but more than 2½% addition, based on the resin solids used, interferes with crease resistance. Addition of urea in amounts equal to 10% of the weight of Aerotex Syrup 250 Conc. solids will prevent fish odors even when goods are excessively cured.

Conventional ammonium salt catalysts are used. However, an organic non-ammoniacal catalyst typified by Aerotex Accelerator UTX shows great resistance to odor development. Under excessive curing conditions, fish odors are produced due to thermal decomposition which results in amine by the nitrogen content of the organic accelerator.

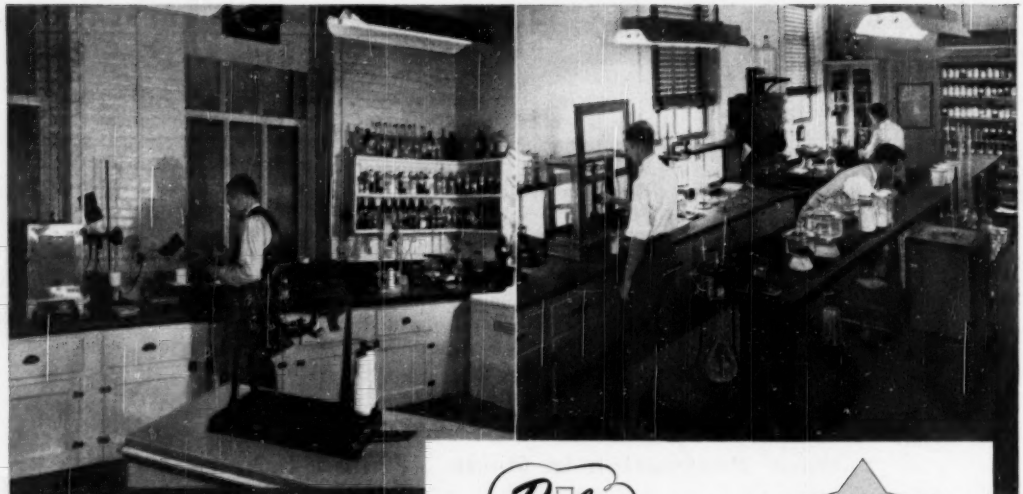
Effects of Storage. Resin treated fabric cured at 350 F without urea retains odor through ageing, but if cured at 300 F loses fish odor. Resin treated fabric given a urea bath does not develop fish odors during ageing regardless of curing temperature. Fabric treated with resins using Aerotex Accelerator UTX develop fish odors on ageing even though no fish odor was detectable at time of treatment.

Testing For Odor. A "hand" odor test consists of rubbing a moist 7" square swatch with the hands and smelling hands continuously as they dry. As the hands approach dryness, fish odors present will be detected. Though not scientific, it is a reproducible and sensitive test. Rapid succession of testing should be avoided to prevent fatigue of the sense of smell. Hands should not be washed with perfumed soap.

Mill Processing Conditions. Drying

SUPPLEMENTING the feature story of the annual convention of the American Association of Textile Chemists and Colorists as published on pages 98-103 in the November issue of "Textile Industries," eight additional papers have been abstracted and are presented here.

All papers offered could not be published in one issue because of space limitations.—Ed.



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after impregnation should be carried out with good air exhaustion, time and temperature of drying being secondary. Curing should be carried out in a minimum length of time at temperatures yielding good fabric properties and durability of finish. High temperature will not result in odor, provided time is not excessive. Careful maintenance of pH should be insured when washing to obtain complete neutralization of the fabric. Alkali and detergent feeding should be regulated to maintain a pH of 9-10 in the wash solution. The pH of the second bath should be maintained with soda ash or sodium bicarbonate at 8. After rinsing, wet cloth pH should be weakly alkaline or neutral.

Final drying after washing should be just adequate to dry the cloth. Sufficient urea should be added to prevent odor development. Use of ammonia, ammonium salts, and salts of formic acid should be avoided. Non-ammoniacal catalysts should be used in place of ammoniacal catalysts.

The Measurement of Static Electricity on Fabrics

By MASON HAYEK
F. C. CHROMEY
E. I. du Pont de Nemours & Co., Inc.

IN STUDYING static electricity on textiles it was desirable to have a method which would indicate the total charge that could be produced on a test specimen under a given set of conditions and which would give information on the rate of decay of charge.

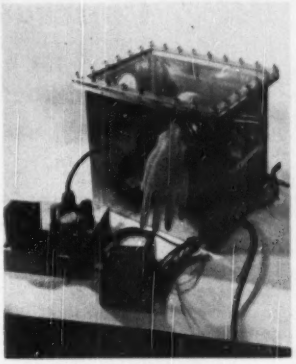
The instrument which was developed combines a machine for generating charges on fabrics and a means of measuring those charges. The machine is mounted in an aluminum box which can be sealed after test fabrics are inserted. Relative humidity can be adjusted within to permit testing under a wide range of humidity conditions. Access to the machine is gained through rubber gloves mounted on the box.

The working part of the instrument consists of an aluminum cylinder mounted on a shaft which is geared to a motor so that it revolves at approximately 300 rpm, a device for generating a charge on test fabrics mounted on the cylinder, and an electronic tube with its attached circuit for measuring the charge developed. Electrification of test fabrics is effected by friction with a second substance, usually another piece of fabric supported on a brass strip beneath the cylinder. Friction can be stopped instantaneously.

If an oscilloscope instead of the rectifier and microammeter is used, characteristics of the current produced in the circuit can be measured. With the oscilloscope, as many as five fabrics can be tested at once. Five peaks would be observed on the oscilloscope and the height of these peaks indicate the relative charges.

Tests are conducted at room temperature at desired relative humidity. Three pieces of fabric of standard dimensions are mounted on the cylinder at equidistant positions after they have been conditioned in the box. Portions of scoured, untreated fabrics are generally used for a contacting surface.

Four measurements are taken for each test: (1) the "charge" two minutes after friction is applied; (2) the half-life period of the charge, or the time required after the friction is stopped for the charge to drop one-half its peak value; (3) the charge one minute after friction is stopped; (4) the full-life period of the charge, the time required for the microammeter reading to drop below one. Untreated fabric is tested as a control.



Equipment used for measurement of static electricity on fabrics.

Study of electrostatic charges on fabrics shows that the rate of decay of charge is probably more important than the total charge produced on a fabric where static propensity is concerned. Rate of decay is a measure of the electrical conductivity of the test specimen, and the magnitude of the charge produced is dependent upon that conductivity. The particular means of generating the charge determines the magnitude of the charge but does not affect the conductivity.

In the accompanying box, fabrics were electrified by friction against untreated nylon fabric at 25% RH.

Untreated wool and nylon both acquired large charges which decayed slowly. Cotton could be charged but to a lesser extent. Treatment of nylon with 0.5% of the antistatic agent almost completely eliminated charge formation. Further tests revealed the dependence of charge and rate of decay of charge on the relative humidity. As the relative humidity and moisture content of the fabrics increased, the rate of decay of charge also increased. The dependence of treated fabrics upon humidity is similar to that of untreated. The behavior of a good agent can be nullified by a sufficient reduction in humidity.

Fabric	Charge	Half-life Period, Seconds	Charge at One Minute	Full-life Period, Seconds
Untreated wool	170	.....	160	—
Untreated cotton	35	9	.....	55
Untreated nylon	145	.....	142	—
Nylon and 0.5% Agent "A"	1	1	.....	1
Nylon and 0.3% Agent "A"	6	2	.....	8
Nylon and 0.2% Agent "A"	48	7	.....	45

Control of J-Boxes and Steamers in Continuous Bleaching

By C. W. BOWDEN, JR., DREW B. DAUBERT
Minneapolis-Honeywell Regulator Co.

KNOWLEDGE of the basic principles determining the types of instruments and applications in a continuous bleach range is essential for high range efficiency. The most critical phase of range operation is control of the reaction chambers.

Steam emerging from reaction chamber openings indicates adequate bleaching. However, this visual criteria fails in the case of excessive steam which sometimes causes precipitation of condensate on goods, leaching out the chemical agents and producing a spotty bleach. Proper steam conditions are obtainable through automatic controls correctly installed and properly operated.

J-Box Controls. The ideal control system senses instantaneous changes in heat demand and immediately corrects for each change to prevent entrance of incompletely heated cloth into the reaction zone.

The rope type DuPont box can be controlled by placing the sensing element of a temperature controller below the top of the first heating tube or the tube in which the cloth travels downward, and providing for admission of steam to hold temperatures just below 212 F. This location provides for determination of excess as well as insufficiency of steam.

No automatic controller will increase the capacity for which the box was designed, but when running heavier than planned for goods, an extra electrical contact in the control instrument should be installed so that the range will be shut down whenever control temperatures cannot be maintained.

A pressure system involving a differential pressure controller with a tap in the enclosure above the plaiter will yield satisfactory results. It lacks the flexibility of the temperature system. The controller set point must be readjusted for changes in fabric construction.

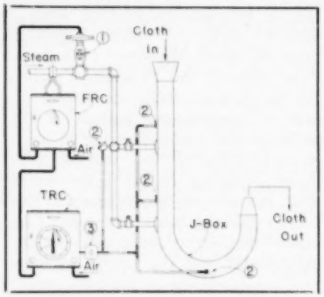
An extension tube four feet long at the entering end adds further capacity to the cloth heater when the range is operated above the design capacity, no matter which control system is employed. Air admitted with the steam into the caustic J-box improves the bleach, particularly in colored goods.

Control of the Du Pont open width J-box is similar to that of the rope type. On older equipment, the entering end of the cloth heater is excessive which results in steam loss.

Becco J-Box. Functions of the Becco J-Box are identical to its DuPont counterpart. The control problem is entirely different due to design and method of operation.

The Becco J-Box cannot hold pressure. Also, the exposed metal plate on the outside of the distribution chest is a desuperheater. Consequently, superheat is absent in the cloth heating phase. The control system is based upon maintaining the steam level sufficiently high to assure heating all the cloth. Satisfactory results are obtained when the level is 18 inches above the center line of the chest, but the limit must be well below the top of the pile of goods.

The steam level is described as a narrow zone between cloth at 212 F and cloth at a considerably lower temperature, the width being approximately three inches. The temperature sensing unit is located at this level, and a setting of slightly below 212 F is maintained.



AVERAGING TEMPERATURE system for control of the Becco J-Box. Legend: TRC, "Electronik" temperature controller; FRC, steam flow controller; (1), control valve; (2), thermocouple; (3), selector switch.

Where control is from single point measurement, a flow meter is used in a cascade hook-up to gain stability. The flow meter offsets large, sudden changes in steam delivery which would result from steam channeling through the J-box.

Heel temperature maintained close to 212 F is necessary for good bleaching. Goods will be spotty at lower temperature.

Another method of control is the averaging temperature system which uses several temperature sensing elements in a pattern, and temperatures of these points are averaged by the control instrument. It is more stable than the single point system. A flow controller is not necessary. A recording flow meter is usually installed to measure steam consumption. In a three-point system, the temperature readings would be approximately 212, 208, and 168 F, respectively, to average 196 F for the temperature set point (see accompanying sketch).

Mathieson Steamers. Control of the Mathieson continuous open-width steamer is simplified since all that is required is that the unit be completely filled with steam at all times.

A temperature-flow combination similar to the cascade system employed for the Becco J-Box is used. Temperature controller range is from 180 to 220 F, using three thermocouples. Another system proposed is a differential pressure controller calibrated for a range of 0.05 to 0.15 inches of water which would serve to keep steamer filled without excessive use of steam.

Selection Of Instruments. All control systems are similar in their need for a highly sensitive temperature controller. A continuous balance potentiometer meets the requirements. Lags or insensitivities in the measuring system might be indicated by a non-varying chart recording. In this event, reliability of instrumentation should be questioned.

A special thermocouple has been designed for J-Boxes which is splash

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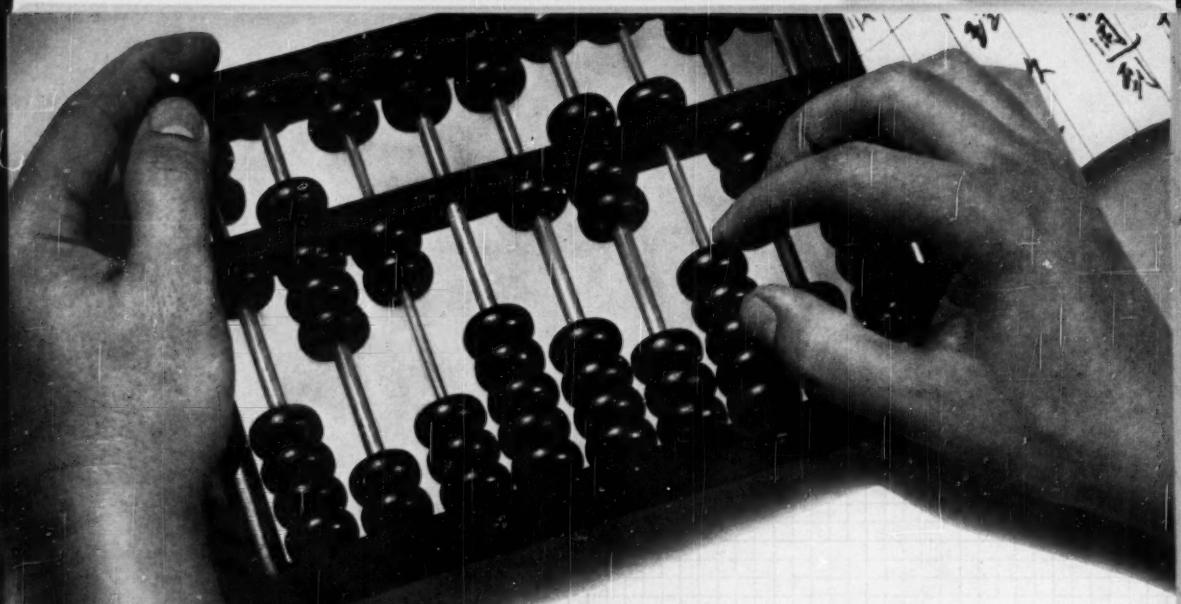

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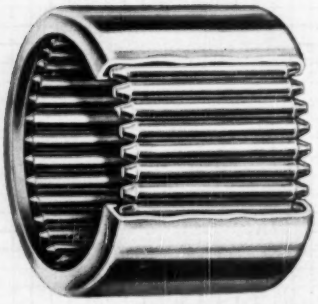

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proof and will not interfere with passage of cloth. Other types used, but not highly recommended, are button-type and capillary averaging type thermometer bulb. A flow controller is unable to detect some load changes, and is not by itself a suitable control instrument.

The Finishers' Position in Regard to New Synthetic Fabrics

By FRANCIS S. RICHARDSON
Waldrich Company

BESIDES being confronted with such variables as technological changes in methods and equipment which challenged finishers in the past, the modern finisher is faced with additional complexities created by man-made fibers.

Use of existing dyes was early explored in connection with dyeing the new fibers. Out of this work came acetate colors. Resinous materials as finishing agents enhanced synthetics with properties which couldn't be obtained by other methods. The finisher can build color, resiliance, abrasion resistance, stability, water repellency, appearance, and handle in the final fabric. This flexibility has evoked an entirely new industry engaged in the manufacture of slack and slack unit yardages, while many women's suits, men's summer suits, and men's regular suits of medium weight are also on the market.

Among other uses of the newer snythetics, automobile sidewall fabrics are now consuming large quantities of fiber. The requirements for light fastness, abrasion resistance, and leaching in these fabrics are being met.

Nylon's acceptance was stimulated by war-time application as parachuting material. The need for stabilization of this fiber was recognized early in its development, resulting in the heat setting machine. Accepted practice is to presume that heat setting by dry heat implies temperatures exceeding 400 F. However, good stabilization may be achieved at temperatures considerably less. A better understanding of end use requirements and mill processing would prevail if the term "temperature of stabilization" was used instead of "heat setting."

Vinyl fiber, Vinyon N, and "Orlon" acrylic fiber will be produced in larger quantities and present processors with a new set of problems. The major use for "Orlon" will be effected in industrial types of fabrics. The lack of suitable coloring material which can be easily applied with existing equipment will restrict its use as a dyed or printed item in the apparel or house furnishing field.

In view of the responsibility vested in the finisher to process a fabric properly, technical assistance should be available from all sources. Manufacturers and suppliers should gauge their statements in advertising, with the finishers' position in mind.

Studies in Textile Printing Applications of the Analytical Method

By R. D. GREENE,
A. F. KLEIN,
F. FORDEMWALT
American Cyanamid Co.

ANALYTICAL methods are useful in evaluating printing processes which can not be compared by the usual testing procedures which depend on color values alone.

Three measurements of a vat print are made. These are:

1. Amount of dye deposited by printing.
2. Amount remaining on fabric after ageing, oxidizing, and soaping.
3. Color value of completed print.

From these measurements, the per cent fixation, color efficiency, and printing efficiency are computed. Color values and efficiencies are expressed in relation to an arbitrary standard representing an established procedure or laboratory control. An efficiency value of 100 indicates that the process is equal to the standard.

The method of analysis consists of extracting the dye with solvent from a measured sample. Dye concentration of extract and color value of print are measured spectrophotometrically.

Applications. By using this method it can be shown that the money value of a printing gum is not based on the amount of dye deposited, but on its over-all printing efficiency. (See Table 1.)

The method may be applied in studying the ageing process. Identical samples of prints are aged in different machines. A control print

TABLE I

Comparison of Prints Prepared from Various Gums

(80x80 cotton printed by engraved chromium plated roll)

5% Prints of Calcosol Jade Green NP Double Paste

Printing Gum	Mg. Dye Present in 100 sq. cm. of print		Color Value	% Fixation	Color Efficiency	Print Efficiency
	Deposited	Fixed				
Standard	3.60	3.55	100	98	100	100
No. 1	3.69	3.04	95	82	110	93
No. 2	4.56	3.75	120	82	115	95

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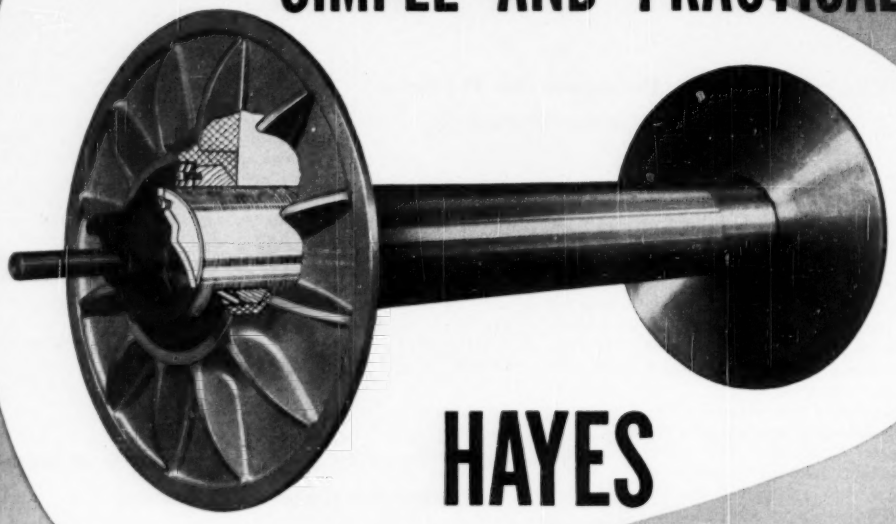
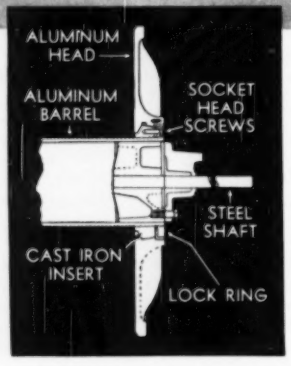


HAYES
ADJUSTABLE LOOM BEAMS



Sectional drawing of New Locking Device — simple — strong — stays put.

NOW, for the first time you can have the most practical, Adjustable Loom Beam yet devised. It is simple, easy to adjust and locks in any position. To secure the head in place, you simply tighten the socket head screws evenly on the locking mechanism. No special tools are required. The new and very simple built-in locking device shown at the left gives you greater head strength, *with no reduction in yarn space.* Here is a New, Adjustable Loom Beam that is strong and sturdy in construction, is accurately made and stays true indefinitely, and of course does not rust. *Yet it is so light in weight that two men can lift it into the slasher with ease!*

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sample is aged, oxidized, and soaped in the laboratory immediately after printing. Commercial samples are then evaluated in the laboratory. (See Table 2.)

The significant difference between agers 1 and 3 can be verified by repeat testing.

Effect of running time of agers prior to usage can be determined by this method. Samples of prints are sent through the agers at different times of the day and the printing efficiency then computed.

The analytical method can be used to evaluate different pigment carrier binders in pigment-print-pad-steam vat printing tests. Corresponding conventional vat prints from a starch-British gum clear are used as reference standards. Efficiencies of this process as determined by test are less than those of the conventional method of applying vats.

Screen prints and roller prints of vat dyes can be readily compared, and the relative economies of the two processes insofar as utilization of dye is concerned can be reliably determined.

TABLE II

Study of Ageing Process

Color	Ager No.	Color Value	% Fixation	Color Efficiency	Printing Efficiency
Pink FF (% Fixation of Standard —80)	1	102	78	105	102
	2	95	76	100	95
	3	94	70	108	94
	4	94	74	101	94
	5	98	76	103	98

Nylon Dyeing—Theory and Practice

By G. T. DOUGLAS
Imperial Chemical Industries Ltd.

DISPERSED acetate rayon dyestuffs are absorbed into nylon fiber from a fine aqueous dispersion of the dyestuff. They are characterized by excellent levelling properties, compatibility in admixtures, and their ability to cover yarn irregularities. The amide group in nylon is responsible for attachment of these dyes.

Molecular size of the dyestuff must be compromised. Small molecules penetrate readily, yielding excellent levelling and good temperature range properties, but low wet fastness properties. With increasing molecular size, opposite effects are noted. Building up properties are limited, though not seriously, by the high proportion of crystalline regions which resist penetration of the dyestuffs to the amide groupings.

Water soluble acetate rayon dyestuffs fail to show salt-controlled exhaustion and sensitivity to liquor-to-goods ratio. An increased rate of dyeing and equilibrium exhaustion attainable in normal dyeing periods may be effected by acid substituted for salt.

Acid Dyestuffs. Acid dyestuffs, varying in degree of sulphonation, will build up shade progressively slower on the fiber, depending upon whether they are mono-, di-, or trisulphonated with the salt linkage mechanism of dyeing. Mixtures of these dyestuffs will lead to dyeing difficulties. Mono-basic acid dyestuffs are preferred because of the high color value realized and their maximum use of the amine end groups in nylon.

This class shows up differences in amine end content. Best covering of irregular quality nylon is obtained with the lower basicity mono-basic dyestuff. Acid dyestuffs which possess high neutral affinity are best suited for covering irregular nylon. Since a portion of this type dyestuff also attaches itself to abundant amide groups by hydrogen bonding, in addition to the salt group by salt linkage, differences in dyeing behavior due to amine end content are minimized.

Dr. George L. Royer (left) American Cyanamid Co., Olney medalist for 1950, is shown accepting the award from **C. Norris Rabold.**

Wool contains 20 times as many amine groups allowing greater depth of shade than nylon as the salt linkage mechanism is similar for both fibers. Incompatible mixtures are less frequent on wool for this reason, since saturation is rarely reached on wool by the time the desired depth of shade is obtained.

Gas Fumes. Gas fume fading is not likely to occur in normal storage or usage of nylon. The free amino groupings protect the dyestuff against the fumes when nylon is dyed with dispersed acetate rayon dyestuffs or to pale shade depths with soluble acetate rayon dyestuffs or acid dyestuffs, but in full shades when the available amine end groups are saturated, gas fading may occur on an imperceptible level.

Chrome Dyestuffs. The introduction of a reducing treatment after the chroming stage insures maximum metallization of the dyestuff within the nylon and also removes residual dichromate. Sodium thiosulphate added to the chroming bath after normal chroming will reduce the dichromate within nylon in 20 to 30 minutes. Chromable dyestuffs yield fast to boiling shades on nylon.

Premetallized Dyestuffs. These dye in the same way as acid dyestuffs but their structural complexity per-

(Continued on page 181)

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Kink Contest Winner

A check for $100 has been sent to Earl H. Hartgrove, Jr., Lancaster, S. C., for his winning entry in the Kink Contest which ended November 15. The kink will appear in an early issue.

Kinks are paid for at regular space rates, and an additional $100 is awarded the winner in each contest.

A new Kink Contest is now under way. Send us your entries.

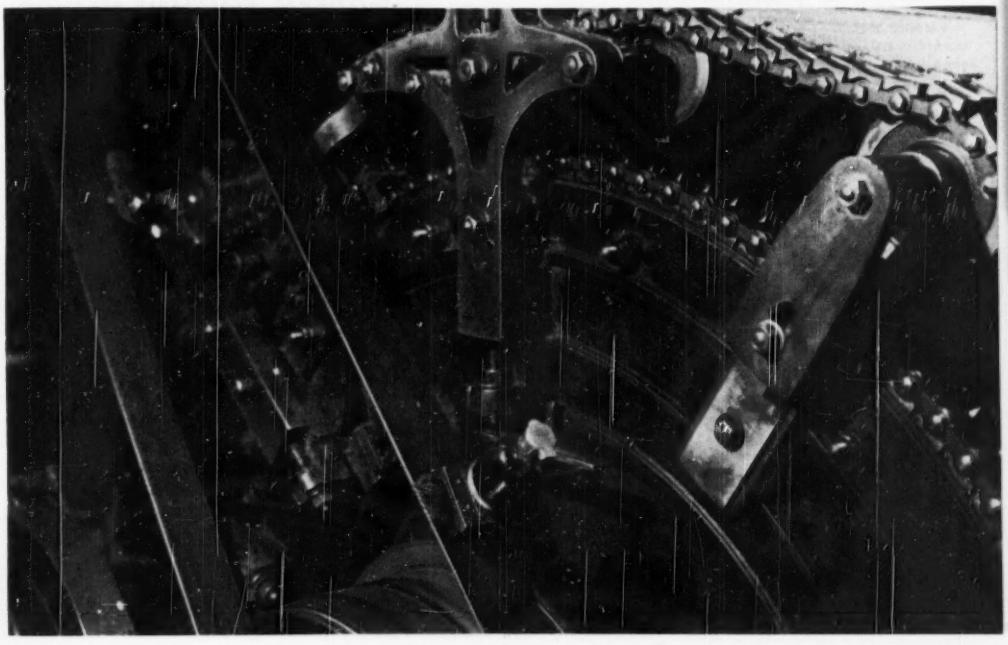
Automatic Belt Dresser

Belt dresser saves time, maintenance, and belts. Less belt slippage results in more production and better quality work.

EXPERIENCED textile men have long realized the importance of keeping belt drives in good condition to prevent slippage and consequent losses in production. Maintaining constant cylinder speed on cards is important both from a quality and production standpoint.

An automatic belt preserving device has been installed on 249 cards in our mill. As a result of this installation, the belts are kept clean and dressed without attention while the cards are running. The device has reduced the amount of falling lint and fly and also prevents belt dressing from dropping on the cotton, causing lap-ups and waste. Little maintenance is required in that the preservative oil reservoir or container has to be filled only once in 10 days, thereby facilitating a sub-

Automatic belt dresser installed on a card. Note plastic bottle with spring cap for quick refilling.



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Formica bobbins mean perfect balance. They're engineered "from the spindle hole outwards" and made of completely homogenous materials.

Formica bobbins are the only high-precision bobbins available to meet the extreme pressures of Nylon and Orlon yarns without mal-function.

Formica bobbins are built of specially developed phenolic parts . . . unmatched for stability, high impact strength and ultimate smoothness.

Formica bobbins permit the replacement of any component part damaged by accident or wear through long usage.

Formica bobbins are available for processing virtually all textile yarns, excepting wool and cotton, from fine denier Nylon for hosiery to heavy rayon for tire cords.

Behind Formica bobbins stand 38 years of experience in mechanical and chemical engineering, plus manufacturing facilities consisting of the most modern machinery. Look to Formica for better bobbins, built to keep pace with progress in textiles. Literature describing Formica's laminated plastic bobbins is available and will be sent promptly upon request. The Formica Co., 4694 Spring Grove Ave., Cincinnati 32, Ohio.

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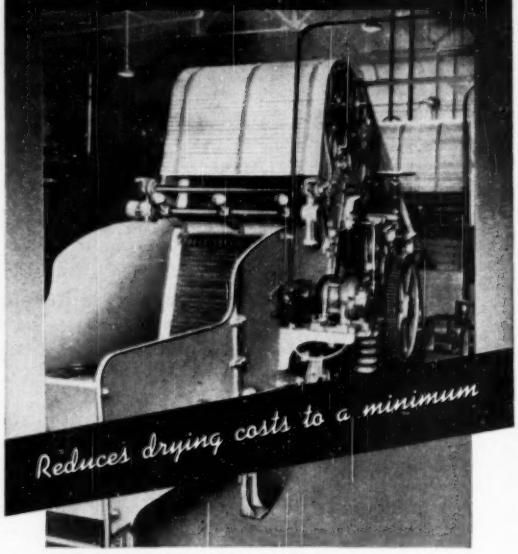
Continuous-Automatic EXTRACTING



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The SARGENT "CONTINUOUS" EXTRACTING SYSTEM is saving thousands of dollars for many woolen, worsted and cotton mills. It employs an Automatic Feeder, the Extracting or Squeeze Roll Machine, and a Stock Dryer. This method of removing surplus dye, bleach, or scouring liquor from wool, staple rayon fibres, shoddy, mixed fibres, cotton and cotton linters, before drying, offers many distinct advantages, including:

- One-man operation, with capacity up to 2,500 pounds per hour.
- Machine made in five widths for varying plant requirements.
- Even and continuous flow of material into and through the dryer.
- Uniform drying results—savings in power—savings from continuous action—savings in labor, with ease of operation.

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C. G. SARGENT'S SONS CORPORATION
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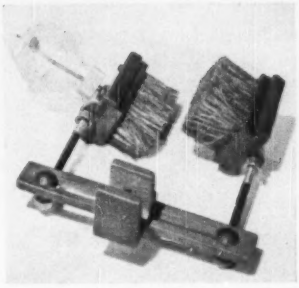
stantial saving in time.

The attachment is simple and easy to install (see accompanying illustrations), and once the belts have been treated by this device, they remain pliable and in good condition to deliver maximum pull with constant tension. The preservative applied to the belt protects it against stretching, cracking, heat, moisture, mineral oil, and prevents slipping. The life of the belting material is considerably extended. With slight modifications, the "Belt Preserver" can be adjusted to fit any make of card.

The attachment consists of two brushes the width of the belt and a bottle attachment on the top brush which feeds the preservative oil onto the belt. Another brush fits under the belt, and the entire installation is bolted onto the side of the card.

The device was perfected and patented after several years of experimenting by W. C. Waters, a card grinder for 14 years at Swift Manufacturing Company, Columbus, Ga.



Close-up view of component parts of belt dressing attachment equipped with screw-on type glass bottle for feeding preservative to the brush which spreads it on the belt.

Improved Method for Cutting Towels from Long Rolls

This item was submitted in a kink contest.

EDITOR TEXTILE INDUSTRIES:

Formerly in our plant a table about four feet wide and nine feet long was used in cutting towels from long rolls. Two girls worked at each table, and the towels to be cut were folded on a trolley placed at the right end of the table.

The end of the roll to be cut was passed over the right side of the table top and laid flat and fully opened. The girl at the right front side of the table used an electric rotary blade cutter to sever the towel from the roll; then she used her left hand to pass the severed towel to the girl on her left side. This girl placed each towel fully opened one upon another until the roll was exhausted. Then the towels were counted and passed along to the "hemmers" for sewing.

The following procedure eliminated the need for the second girl and speeded the work of the girl who actually cut the towels:

(1) Reduce the size of the table to four feet square.

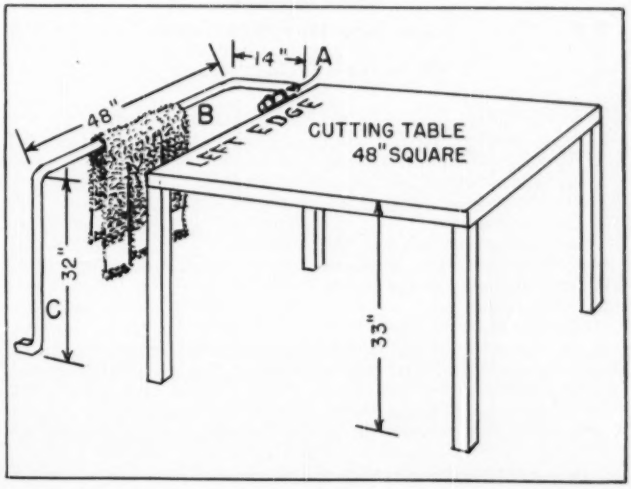
(2) Attach a piece of ¾" pipe to the left side of the table as shown in the accompanying sketch.

The cord for the electric rotary cutter should be suspended over a point about 12" from the left edge and 24" from the front edge of the table. This keeps the cord clear of the cutter and prevents the cord from being accidentally cut by the rotary cutter blade. The cord is also kept out of the operator's way.

One girl now stands at the left front corner of the table. To start the first cut, she holds the cutter in her right hand. The first towel is passed over the right end of the table and over the bent tube attachment, and the operator severs the towel from the roll at the cutting mark, which was woven in at the loom. The severed end falls into the space between the left edge of the table and the bar, and the cut towel hangs over the bar.

The operator's left hand is used to pass the next towel on the roll to cutting position, the cutting operation is repeated with the right hand, and each towel is left hanging over the bar until the roll is exhausted.

To remove the cut towels from the bar, the operator passes both hands under the bar, lifts the towels off the bar, and lays them flat and in a position for the next



operation.

A mechanical counter attached to the rotary cutter may be operated by a movement of the right thumb upon conclusion of each cutting stroke, thereby eliminating a separate counting operation.

One girl regularly cuts 500 to 600 dozen towels by this method on each shift. Considerable floor space is saved, and one operator cuts about 15% more towels than was formerly possible.

CONTRIBUTOR No. 8318

Comments on "A Pork Barrel War"

Subject Briefed: *The article "A Pork Barrel War," referred to in the accompanying letter, included a proposed method of paying for a war at the time it is being fought, and a way to offset inflationary trends in wartime. The author of the article proposed that everyone contribute a portion of time in addition to the regular work week in an effort to stem inflation and also to increase production without requiring additional production operatives which may not be available. The following comments present one reader's reaction to the article.—Eds.*

EDITOR TEXTILE INDUSTRIES:

With reference to the article "A Pork Barrel War," which appeared in the October issue of TEXTILE INDUSTRIES (Page 139), I should like to say that I am heartily in favor of the idea of stopping the coddling of our industrial workers by offering fabulous wages to get them to produce the necessary tools to win a war. Money does not win a war, but it is production of arms and supplies to furnish the fighting men that does the trick.

If the soldier on the firing line can do without things, I can see no reason why the home front cant' do the same thing. In the event of another war, let's pay for it as we go instead of saddling generations to come with the responsibility of doing it. If a person desires to stay at home instead of fighting, he should be willing to help pay for the war either by paying an extra high income tax or donating so much of his time each week to the war effort as his part in winning the war. We cannot buy patriotism; it must be born or bred in the person.

We can no more spend ourselves rich than we can drink ourselves sober. Inflation in time of war or crisis must be curtailed if we are to exist as a nation. In time of war if wages and prices are rigidly controlled and reasonably administered we can lick inflation. The disgraceful strikes engineered by certain notorious labor leaders during the last war must not be repeated.

CONTRIBUTOR No. 8342

Systematic Program of Loom Maintenance

EDITOR TEXTILE INDUSTRIES:

I have found that with a systematic program of preventive maintenance on looms, many of the problems arising in the weave room can be forestalled. I follow a simple procedure as follows:

Tighten all nuts and screws, and take up all lost motion in various parts of the loom. Time the loom once every 30 days. Sandpaper should be used to polish all race plates and rollers to avoid excessive friction and to keep parts from coming loose.

Keep the transfer hammer filed and rounded off on the fork end. This part should be sandpapered to keep the illing from breaking on the change.

Put friction felt next to the snake head, and keep shuttle edges rounded off and grooved out to maintain proper tension on filling.

These simple suggestions should do much toward simplifying the fixer's job and reducing the amount of maintenance necessary on an overall basis.

CONTRIBUTOR No. 8283

Kink Contest

$ $ Your Idea May Win $100 $ $

This contest ends March 15, 1951

ONE HUNDRED DOLLARS will be awarded for the most helpful short cut, kink, time-saving device, cost-cutting suggestion, or quality improvement idea submitted by March 15.

Contributions eligible for the prize must not have appeared elsewhere and must not be sent to any other publication.

All material will be paid for at regular space rates upon acceptance irrespective of the contest winner. Advise when submitting entry if participant's name may be used. Only one award will be made in each contest.

Participants are not restricted as to number of items submitted to compete in the contest. Each entry should be described in sufficient detail to make it easily understood, and where possible, glossy photographs or pencil sketches should be included. Finished drawings are not necessary.

All entries for this contest must be postmarked not later than midnight, March 15, 1951. Address: Editor "Textile Industries," 806 Peachtree Street, N. E., Atlanta 5, Georgia.

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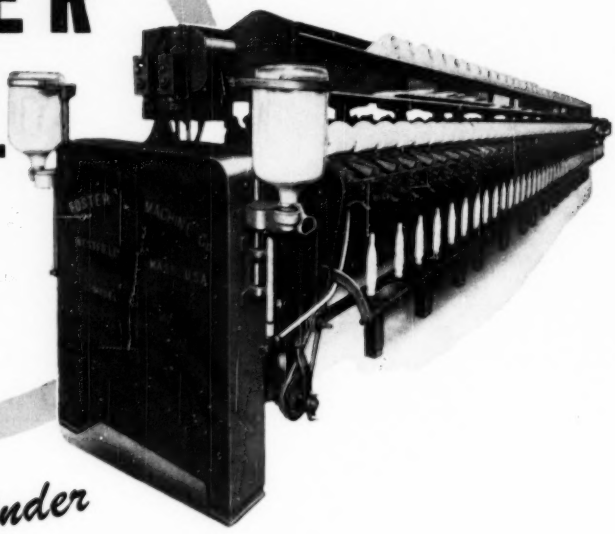
FOSTER MODEL 102



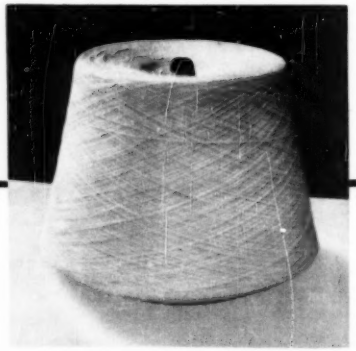
The Versatile Winder For Wool and Worsted

The Foster Model 102 winds soft twist and hard twist yarns of any count or type, on warping cones, knitting cones, parallel tubes, dye packages or twister packages. It can be built to wind 6" traverse or 7" traverse, any taper and any angle of wind from 9° to 18°. This is the versatility of Foster 102.

Low maintenance is another feature of Model 102. All machine parts contacting the yarn, including traverse guides, are made of hardened metals or porcelain, specially selected for the purpose. Sturdy construction, with reduced vibration and wear, means longer service without repair. Repair costs run as low as $3.50 per year per 100 spindle machine.

Other advantages of the Foster Model 102 may be summed up as increased production features. The 102 can be built to take a 7" traverse cone if desired, reducing doffing and handling. It is equipped with one of several Foster self-threading tension and slub-catching devices, and operates at high speeds winding soft twist yarns (one mill we know is running 70s worsted yarn at 400 y.p.m.). The supply bobbin is always in exact alignment with the tension bracket, near enough to get a single balloon, thus reducing strain on the yarn. The empty bobbin conveyer below the bobbin pins empties directly into a standard sized truck, — eliminates lifting and rehandling.

Put it all together and it spells better winding of wool and worsted at less cost, with the Foster Model 102.



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Box for Removing Burning Cotton

EDITOR TEXTILE INDUSTRIES:

When a fire starts in the opener or picker room, the operator's first thought is to remove the burning cotton. Therefore, he prepares to do this immediately.

The burning cotton is usually piled in the first box or truck that can be found, regardless of the type of box it is—that is, whether it is made of wood, fiber, or metal. Then it is pushed outside and left to smolder until someone has time to spread the cotton on the ground and put the fire out.

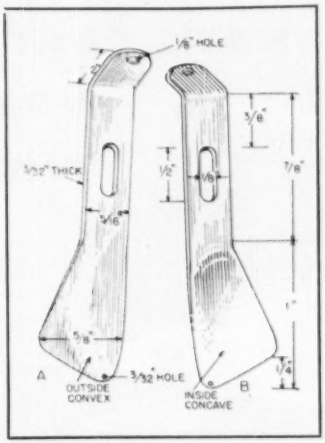
Suppose the box is made of wood or fiber. The burning cotton will probably damage it to the extent that it cannot be used again until it is repaired.

Metal boxes with perforated or slatted bottoms should be provided in opener and picker rooms for use in case of fire. Burning cotton can be placed in these boxes, pushed outside, and wet thoroughly with water, extinguishing the fire without removing the cotton from the box.

The perforations in the bottom of the box will permit the water to drain from the stock.

It is suggested that the boxes be painted red with the words **"Fire Cotton'** stenciled on them in large white letters. They should be kept in strategic places (just as fire extinguishers are), and operators should be instructed to use them only in case of fire.

CONTRIBUTOR No. 8327



Construction details of modified side feed finger for Model K circular knitting machines.

Modified Side Feed Finger for Model K Machines

EDITOR TEXTILE INDUSTRIES:

On "K" machines where side feed is used, the standard finger is somewhat light for the heavier gauges. When needles and yarn break, this usually causes the side feed finger to snap. A modified finger is very useful in knitting fancy hose when the side feed is used. The new finger can be made of sheet steel and tempered to suit individual requirements.

The finger is 3¾ inches in overall length and is made of 3/32-inch sheet steel, ¾-inch wide. The top part is cut 5/16-inch wide, one inch from the bottom of the finger. A ⅛-inch hole is located 3/16-inch from the top of the finger with a bend ½-inch from the top. The distance from bend to top of slot is 1½ inches. The slot is ⅞-inch long and 9/16-in. wide to provide for an adjustment to suit each machine.

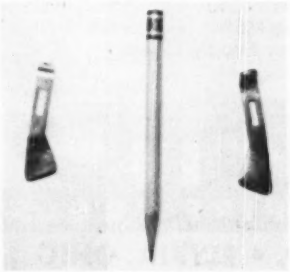
As shown in the illustration, the "spoon" on the bottom should be concave enough to clear the needle latches and permit the yarn to feed freely. The spoon should be one inch long with a taper half way down and then continued into the bottom. This provides a larger surface for the needles to pass and allows the yarn to feed better.

In the bottom it is best to have the smallest hole permitted by the size of yarn. A small hole prevents the yarn from skipping in feeding float stitch patterns. The hole should be very smooth and close to the bottom. All other holes should be smooth and free from burrs.

The inside of the finger should be tapered from top hole to bottom. This will prevent idle needles from catching yarn and pulling it out as the needles pass the finger, thereby reducing seconds and yarn breakage.

CONTRIBUTOR No. 8198

Two views of modified feed finger. Pencil in center shows relative size of parts.



Effect of Break Draft on Drawing, Spinning

Question Briefed: *We have found it necessary to change our roving hank size from .85 to .50 for producing 6s, 7s, and 8s yarn. We are using conventional draft slubbers and Whitin long draft spinning. Will the break draft on either the slubbers or spinning frames, or both, affect the yarn breaking strength?* (CONTRIBUTOR No. 8297, *October*, 1950.)

EDITOR TEXTILE INDUSTRIES:

Break draft on conventional roving and spinning frames serves to loosen the fibers and prepare the sliver or roving for the bulk of the drawing which occurs be-

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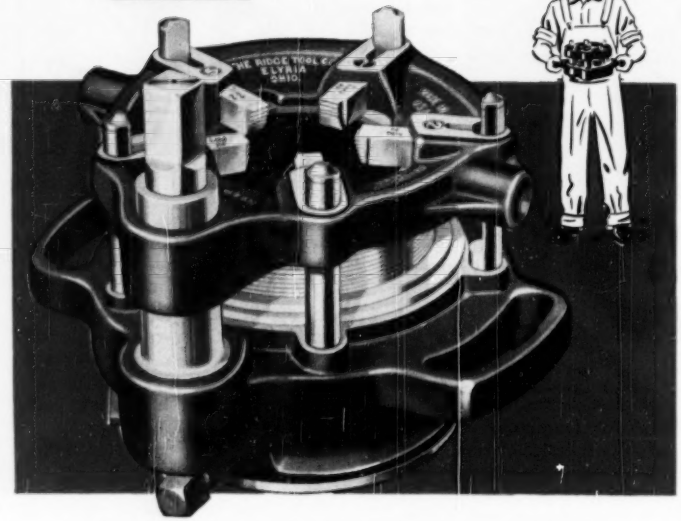

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HOW OTHER MEN MANAGE

tween the middle and front rolls A low break draft on conventional type slubbers seems to give the best results as far as tensile strength in the finished yarn is concerned and also decreases the tendency for ends down.

I have found that a break draft of 1.15 or 1.2 produces the best results. Any higher break draft tends to cause uneven drafting, and as a result breaking strength of the finished yarn will be affected. The break draft on the slubbers can be easily kept this low. The fibers are easily loosened because they are not twisted but are a loose mass of fibers held together by the affinity of the individual fiber as well as the fiber mass. The 1.2 break draft has been found satisfactory for processing .80 roving from 65-grain sliver with a total draft of over 6. The break draft of 1.2 would be followed with a front draft of approximately 5 which gives an overall draft of 6.

If numbers are run coarser than .80 hank, it is advisable to cut the break draft to 1.15 in order to balance the ratio of front to back draft at either approximately 4 to 1, in the case of finer numbers, and approximately 3 to 1 on the coarser counts of roving. The foregoing ratios have given better results than using one standard ratio for all counts run on the slubber. On long draft slubbers the opposite is true. On the 4- and 5-roller systems the drafts should be much more uniform in each drafting zone. For example, on Whitin fly frames utilizing the four-roll system, drafts should be almost the same in the back and front drafting zones in order to give best results.

In making 2.00-hank roving from 65-grain sliver with an overall draft of approximately 16, I have found that a draft of approximately 4.1 in the back section or a sliver weight of about 16 grains gives the best results as far as evenness and breaking strength are concerned. The front section would then have a draft of 3.9. Break drafts must be increased if any great change in the overall

draft of the frame is made on the conventional system, but on the long draft system a break draft of approximately 4 is satisfactory for roving running from 1.00 hank to 3.00.

Break drafts should normally run slightly higher on the spinning frames, due to the twist in the roving and the necessity for the counteraction of twist in the roving. Yarns can be spun satisfactorily with drafts as high as 14 without affecting the quality and without changing the standard break drafts. Overall draft of the spinning frame affects the quality of the yarn in spinning more than any variation of break draft, and any reasonable draft set-up can be run with standard break drafts and do good work.

CONTRIBUTOR No. 8341

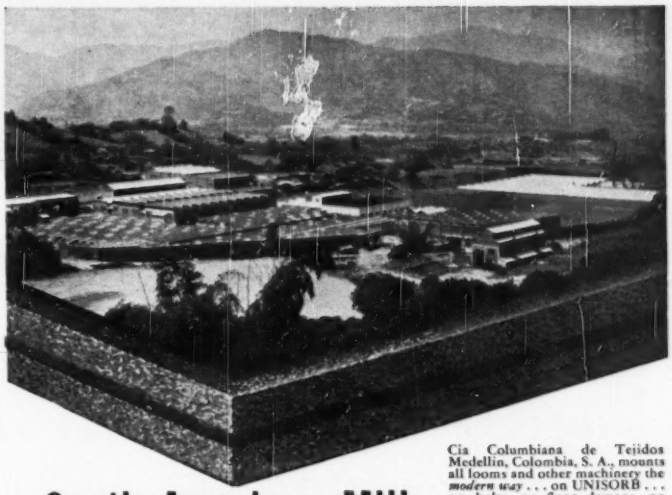
Piece Rates for Looper Operators

EDITOR TEXTILE INDUSTRIES:

Many mills pay their looper operators on a piece work basis, and usually the rates are very low for the operatives as a group. Only the most efficient girls with ability to maintain high production cash in on these rates, and in most mills the number of girls in this category is small when compared to the number who cannot measure up.

In an effort to make up for the difference in pay, the slower, less experienced girls take more chances with their work and as a result an excessive number of menders are found when the hosiery is examined.

A system should be installed whereby the less experienced operators can decrease the gap between their pay and that of the veteran operators. Paying these girls a slightly higher rate based on the number of months of experience they have is one method by which this can be accom-



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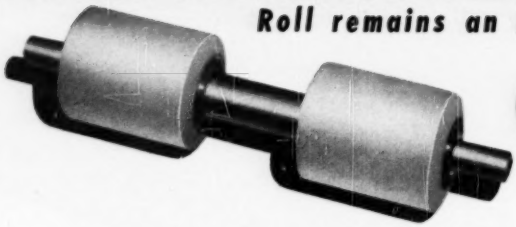
Roll remains an integral unit at all times



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"INTEGRAL BUFFING" assures PRECISION OF NIP:

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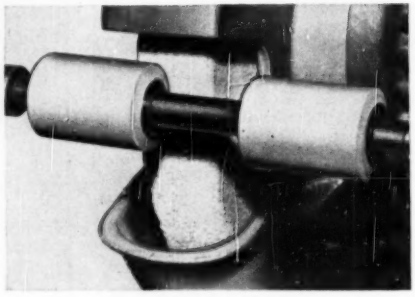
gives "Integral Buffing" →



Here is an attachment by which CLIMAX rolls with any type of covering are buffed to the superior precision only possible where the shell remains in undisturbed relation to the roll. "Integral Buffing" gives higher quality yarn due to precision nip and cleanliness of cots. At the same time, the cost and time of buffing are much less. The Climax Buffing Attachment is readily applied to any of the buffing lathes in common use.

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Climax Ball Bearing Top Rolls are made for

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- Cotton System Roving Rolls
- American System Worsted Rolls
- French and Bradford Worsted Rolls
- Wool Spinning Rolls

Climax Rolls are custom-made to suit your equipment and your weighting requirements.

plished. This rate should be subject to reduction after the training period which might require as much as nine months.

Also, all of the looper operators should be given an increase in rate based on a reduction in the number of menders found when the hosiery is examined. How many mills permit the operatives to see records of menders picked out and the examiner's statement of the causes of these defects? Looper operatives like to see these reports, and they are usually anxious to improve their work.

Possibly your readers will say "Maybe this system would have worked several years ago, but it does not apply today." Then may I ask who is to blame for logical systems not working today? After all, we are supposed to be living in the most progressive of all ages. Right?

CONTRIBUTOR No. 8333
(Canada)

Maintaining Size on Circular Knitters

EDITOR TEXTILE INDUSTRIES:

I would like to have the opinion of your readers as to why it is harder to keep a set of old knitting machines in proper size than a new set.

CONTRIBUTOR No. 7930

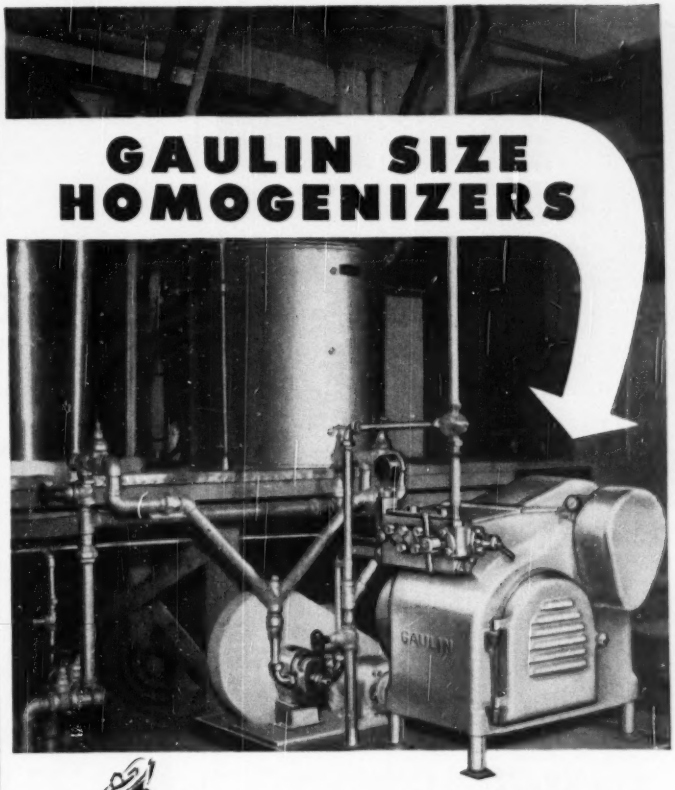
(There must be many ideas on this subject. Send yours to the editors of this magazine for publication. One mill man's opinion is presented here.)

EDITOR TEXTILE INDUSTRIES:

I have found from experience that the difficulty described by CONTRIBUTOR No. 7930 is due to failure to keep stitches even all of the time. If the cams are worn so much that they cannot be set close enough, they should be replaced by new ones.

An old set of machines will run just as good as new machines if stitches are kept right by correct cam settings.

CONTRIBUTOR No. 7931.



Pay for Themselves Out of Savings

- *Improve Quality of Size*
- *Lower Heating Costs*
- *Reduce Cooking Time*

Records in mill after mill prove that Gaulin Homogenizers all save time, money and improve the quality of size.

Precision made of the highest quality materials, Gaulin homogenizers can be depended upon to maintain uniform size quality year after year. Their rugged construction throughout assures long-lived performance with little if any maintenance costs.

Get the full facts today. Find out how you can save with Gaulin Homogenizers.

Gaulin

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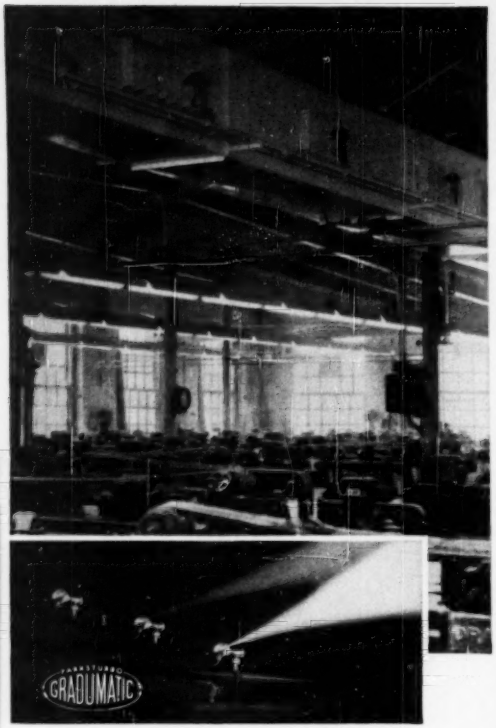
MANUFACTURING COMPANY, INC.
51 GARDEN STREET, EVERETT 49, MASSACHUSETTS

SEND COUPON TODAY

Gentlemen: Please send complete information on Gaulin Size Homogenizers and booklet on homogenized size preparation.

NAME .....
COMPANY ..... TITLE .....
CITY ..... STATE .....



Airchanger and Gradumatics

What comfortable operating mill temperatures — lowered by evaporation! What uniformity of room conditions here; temperature and humidity both!

Gradumatic Humidification with Parks Automatic Airchanger gives surprising results. Gradumatic atomizers operate continuously. Psychrostat notes any change and modifies or graduates moisture output, up or down, as needed.

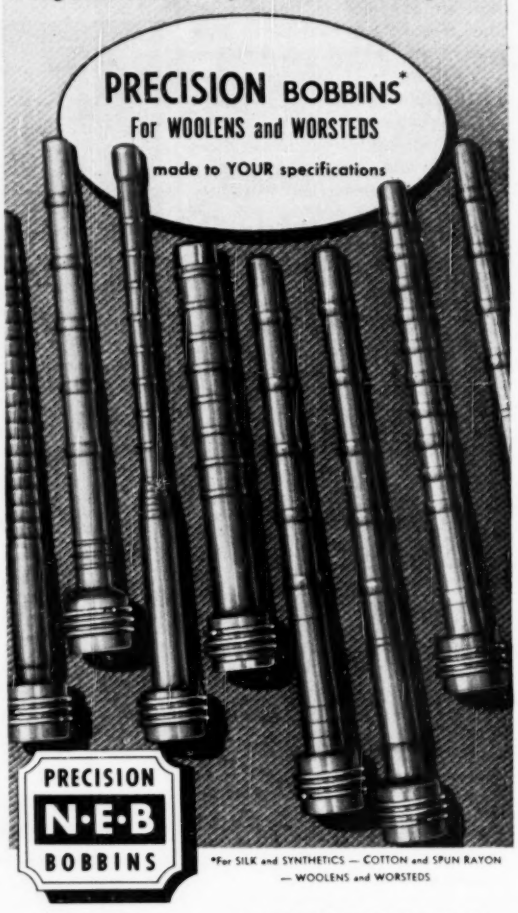
● **This new Gradumatic system is direct humidification at its best.**

Parks-Cramer Company

Fitchburg, Mass. PARKS Certified Climate Charlotte, N. C.

For WOOLENS and WORSTEDS

NEB PRECISION Automatic Loom Bobbins for woolens and worsteds are precision-engineered to *your* requirements . . . give smooth-operating, waste-reducing, trouble-free performance . . . in "Hard-Oil" finish for ordinary use . . . NEB Baked Enamel long-lasting finish for severe conditioning . . . try NEB PRECISION-Engineered Bobbins on *your* looms — and compare!



*For SILK and SYNTHETICS — COTTON and SPUN RAYON — WOOLENS and WORSTEDS

Precisioned to Size — Precisioned for Concentricity
Precisioned for YOUR Spindles . . .

★

NEW ENGLAND BOBBIN & SHUTTLE CO.

Makers of PRECISION *Automatic Loom Bobbins*
NASHUA, NEW HAMPSHIRE

Representatives:

HENRY H. HERSEY, Norwood Place, Greenville, S. C.
HARRIS MFG. COMPANY, 443 Stonewall St., S. W., P. O. Box 1982, Atlanta, Ga.
H. W. CURTIS, 735 W. Crescent Ave., Allendale, N. J.
THE CHARLOTTE SUPPLY CO., Charlotte, N. C.

Export Agents
VANDERBURGH & CO., INC., 25 Beaver Street, New York 4, N. Y.
HARRIS & UNDERHILL, 446 Statler Building, Boston, Mass.

NEW EQUIPMENT AND MATERIALS

Kook-More-Koils

Twenty per cent greater heating capacity is said to be effected with Langsenkamp Kook - More - Koils. Steam waste, product contamination, and loss of heat are eliminated. Design provides quick, clean, economical atmospheric evaporation.

Units are constructed three complete rounds high, each round of coil having an individual steam feed and separate condensate return. New steam does not have to force condensate through series of coils, thereby losing heat.

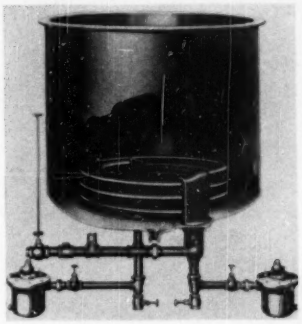
Fresh supplies of steam circulate rapidly through each of the three coils, entering from inlet side of coil header and traveling with accumulated condensate back to outlet or drain side. Divided header houses one main steam feed line and one condensate return line.

Usually fabricated of copper, nickel, or stainless steel, coils can be obtained in any desired metal. Coils will operate at pressures up to 150 psi.

Individual traps, through which excessive amounts of condensate may be discharged, are furnished with coils.

F. H. Langsenkamp Co., 227 East South St., Indianapolis, Indiana.

For additional data, request item L-109, using business reply card on page 196.



Kook-More-Koils (Langsenkamp).

New Printing Blanket Eliminates Back Grey

A new type of blanket for textile printing, which is reported to completely eliminate the need for the conventional back grey, has been announced.

The new product successfully welds natural and synthetic fibers with synthetic rubber into an endless blanket with a washable, absorptive and extremely durable print surface, the company statement said.

It was pointed out that the new blanket combines the best features of nylon back grey and the company's Darex embossed wash blanket.

Dewey and Almy Chemical Co., Cambridge, Mass.

For additional data, request item L-112, using business reply card on page 196.

Spinning Frame Conversion Features Aluminum Pulleys

Aluminum driving pulleys with die cast aluminum hubs and ball bearing die cast aluminum idler pulleys are outstanding features of a recently developed system for converting spinning and twister frames from a cylinder type spindle drive to an individual pulley drive wherein each pulley drives four spindles.

The driving pulley weighs only 1½ pounds. As a result, less power is required to operate the frames so modified. Also, spindles do not coast

"THE MARVEL" METHOD FOR MENDING HOSIERY

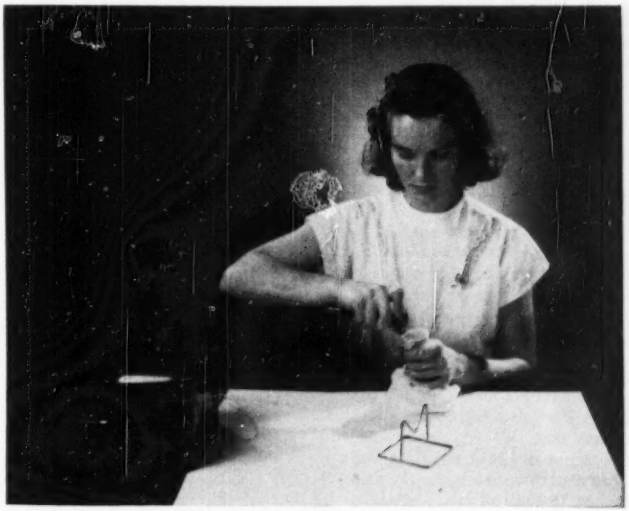
Developed for the fast correction and quality up-grading of pulled threads and snags, regardless of length, in hosiery and other knitted fabrics, "The Marvel" method and machine affords a 40 to 50% time saving, it is claimed.

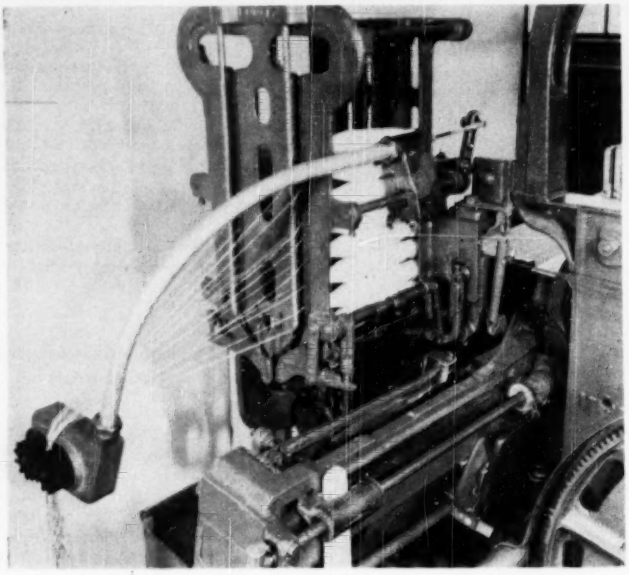
Operators can be trained in a few hours. Up-grading and salvage of long pull threads formerly too expensive to repair can be accomplished.

The method, machine, and patent rights are owned by the Marvel Specialty Co. which is controlled by Claussner Hosiery Co. and Princeton Hosiery Mills. The method and machines are available under a lease agreement.

Marvel Specialty Co., Inc., P. O. Box 125, Paducah, Ky.

For additional data, request item L-118, using business reply card on page 196.





POSITIVE FLEXIBLE CONTROL FOR THREAD HOLDER

The positive geared thread holder utilizing a flexible type linkage control was developed to obtain a more positive means of removing slack in filling threads from bobbins stored in stationary magazines on C&K automatic bobbin changing looms.

The control (shown here encased in a pre-shaped ½ inch tube attached to the thread holder box in the left foreground) is known as the Simmonds No. 4L Lightweight Push-Pull Control. It provides a positive motion, through a pawl and ratchet, to the gears which serve as thread pullers.

According to the manufacturer of the control, it is available on new looms and can be applied to existing looms.

Simmonds Aerocessories, Inc., Tarrytown, N. Y.

For additional data, request item L-301, using business reply card on page 196.

to a stop when the frame is stopped for doffing or other reasons, because little inertia is built up in the light weight shaft and pulleys.

The idler pulleys are said to be larger in diameter than conventional pulleys—spinning idlers, 3½ inches; twister idlers, 4¼ inches. Life of the bearing is increased since it is not necessary for this pulley to turn as fast as smaller pulleys. Lubrication of these overhead tape tension units is simplified since two types of ball bearings are available for the pulleys—one that will require lubrication every two years and another that requires attention tvery 10 years.

Anoher feature of his conversion is the chain drive. Steel shaft on which the individual pulleys are mounted is supported by ball bearing units that will not need lubricating for ten years.

Advantages claimed for the individual pulley drive include: more constant speed of spindles; long life; low maintenance cost; and less power required for operation of frames.

Manufacturer will convert frame for trial and train mill mechanics procedure for converting others. Or, if preferred, manufacturer will convert tntire installation.

Holloway Manufacturing Co., 1155 Victory Drive, S. W., Atlanta, Ga.

For additional data, request item L-101, using business reply card on page 196.

Catalyst for Resin Baths

Development of Catalyst AC-4 for use in resin baths of both urea and melamine types has been announced.

Catalyst AC-4 promotes resin polymerization and fixation during curing operations, it is claimed.

Textile Chemicals Dept., Merrimac Div., Monsanto Chemical Co., Everett, Mass.

For additional data, request item L-103, using business reply card on page 196.

Automatic Pressure Control for Stock Dye Kettles

In dyeing fine stock or extra heavy loads of stock in totally enclosed, pressure type stock dye kettles, pressures tend to build up much more than with coarse stock or normal loads. A method of automatically reducing this pressure has been incorporated in the Fleet Line stock dye kettles.

The operator of the dye kettle sets the control for the pressure which he desires. As soon as the pressure in the kettle exceeds that amount, this pressure automatically opens a bypass so that part of the dye liquor in the kettle goes directly to the expansion chamber, insead of through the stock and then to the expansion chamber. Thus the pressure is automatically reduced to the predetermined normal.

Riggs & Lombard, Inc., Lowell, Mass.

For additional data, request item L-104, using business reply card on page 196.

Electronic Side Register Control

A new electronic side register control that automatically and accurately maintains the lateral position of a moving web of material on slitting, re-winding, and other processing machines has been announced.

Designed to increase production by stepping up machine speeds and to minimize waste, decrease costs, and provide a more uniform product, the side register control responds to a signal from a printed line on paper, plastic, or cloth of 1/32" minimum width.

The control ignores all signals from printing adjacent to the guide line on the trailing edge of the scanning sweep. It also follows broken lines of the same width, and will not change web position if the web breaks. Instantaneous response is

For flexibility in

NYLON SETTING

investigate

PROCTOR EQUIPMENT

Whether you manufacture a nylon fabric as heavy as sailcloth—or as light as net—Proctor equipment is available to insure you a *perfect setting.*

As a result of considerable research and a long period of test work in the field—Proctor engineers were able to develop two basic types of equipment for nylon setting. Both types have established performance records in commercial installations. Hundreds of thousands of yards of nylon fabrics have been set in these two types of equipment.

One type is for setting woven fabrics and is designed to handle nylon cloth either under tension or slack, in the same machine. With this equipment installed in your mill, it is possible to set, in the same unit, crepes, spuns, and other goods which must be handled in a tension free manner, as well as industrial cloths, upholstery fabrics, and other goods requiring tension and contact setting.

The other basic type is used for setting tricots, simplexes, laces, nets, and similar fabrics. So well designed is this equipment, that leading manufacturers are obtaining excellent setting on tricot fabrics up to 120" wide.

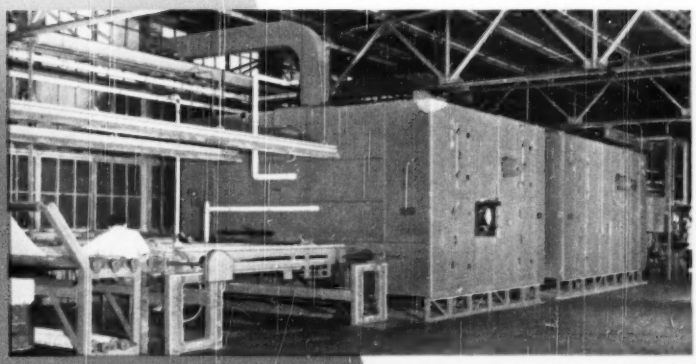
For dependable results in nylon setting—investigate Proctor dependable equipment.

PROCTOR & SCHWARTZ · INC ·

PHILADELPHIA 20 · PA ·

Designers and Manufacturers of

AUTOMATIC BLENDING and STOCK CONVEYING EQUIPMENT • CARDING and GARNETTING MACHINES • DRYERS FOR STOCK • YARN • PIECE GOODS • NYLON SETTING



Typical Proctor Unit for setting nylon tricot.

FOR
TRICOT
SIMPLEX
LACE
NET
INDUSTRIAL CLOTH
SAILCLOTH
CREPE
SPUN

WASTE MACHINERY DESIGNED FOR YOUR NEEDS...

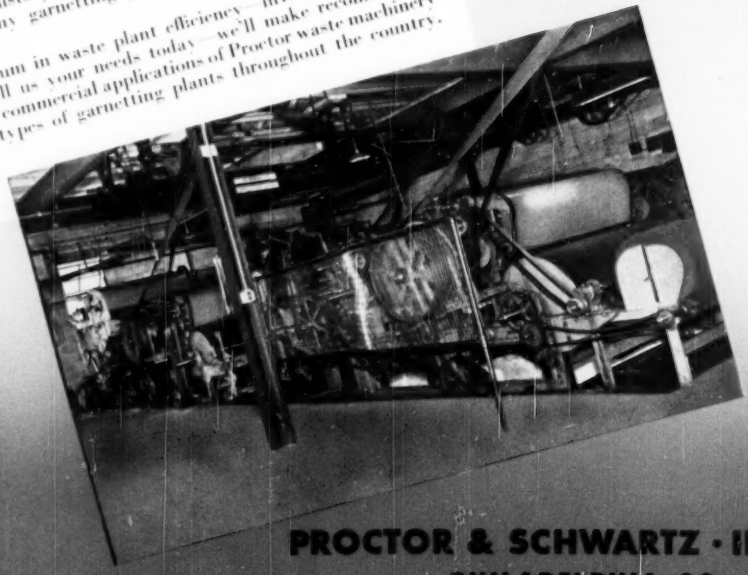
From a simple picker to a complete system

With the tremendous increase in the demand for garnetted fibers that has come about during the past few years—Proctor engineers have put considerable effort into the development of equipment to meet that demand. As a result—it is possible for you to have Proctor equipment installed in your plant that is specifically designed to meet your needs—whether those needs indicate a simple rag picker or a completely automatic system for reducing fabric to fiber.

Many advances have been made in handling garnetted stocks to keep pace with the influx of rayons, nylons and other synthetics which are today appearing in the waste markets.

Proctor equipment is today producing better garnetted stocks than ever in its history . . . more of it and at costs considerably under that of any garnetting plants equipped with less recent equipment.

For the maximum in waste plant efficiency—investigate Proctor equipment. Tell us your needs today—we'll make recommendations based on commercial applications of Proctor waste machinery in use in all types of garnetting plants throughout the country.



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Designers and Manufacturers of

AUTOMATIC BLENDING and STOCK CONVEYING EQUIPMENT • CARDING and GARNETTING MACHINES • DRYERS FOR STOCK • YARN • PIECE GOODS • NYLON SETTING

provided for errors as small as .001 in. or less, it is claimed.

General Electric Co., Controls Division, Schenectady 5, N. Y.

For additional data, request item L-107, using business reply card on page 196.

Wrinkle, Shrink Resistant Finish for Cottons and Rayons

A textile finish that will impart durable wrinkle resistance and shrink resistance to cotton and viscose rayon fabrics has been trademarked "Zeset."

Spun viscose rayon fabrics treated with "Zeset" durable wrinkle resistant finish can, it is claimed, be laundered and bleached under the usual home conditions without loss of strength and discoloration. "Zeset" also gives fabrics a soft, woollike finish.

An outstanding characteristic cited for "Zeset," from the standpoint of the textile processor, is the ease with which it may be applied and the fact that its use eliminates many of the problems formerly associated with the application of crease-resisting and stabilizing materials. It can be applied by any mill possessing efficient padding, drying, heat treating, and washing equipment used in applying thermosetting resins. It is diluted by simply mixing with water, and is stable during storage. Treating baths are stable for days at room temperature, according to the manufacturer.

E. I. Du Pont de Nemours & Co., Inc., Fine Chemicals Div., Wilmington, Del.

For additional data, request item L-108, using business reply card on page 196.

Molded Fiberglas Roving Truck

A new Fiberglas Roving Truck is of one piece molded construction with smooth inside finish.

Being made of Fiberglas, this truck contains no rivets, screws or bolts, is lightweight, tough, and moisture-proof. It is impervious to oil, grease and most chemicals.

Available in five popular sizes, the truck may be equipped with any style of casters needed.

Westport Fibre Corp., Westport, Mass.

For additional data, request item L-110, using business reply card on page 196.

Roving Truck (Westport).

Thick-and-Thin Rayon Yarn

Widening the possibilities for unusual textures in both fashion and home furnishings fabrics is a new thick-and-thin novelty viscose rayon yarn. This multifilament yarn, of finer filament, finer denier, and subtle sheen, is adaptable to virtually any type of textured fabric construc-

REDUCE "ENDS-DOWN"—CUT COSTS

WITH

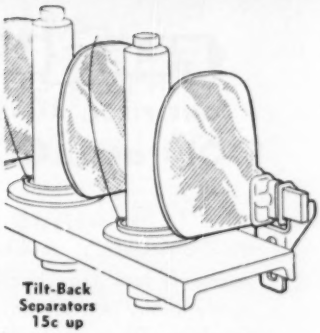
WHITEHEAD

Permalite

ALUMINUM ALLOY SEPARATOR SHIELDS

Why burden your frames—and your overhead—with heavy, old-fashioned iron separator shields? Whitehead Permalite Shields are made of a special aluminum alloy—strong as steel but many times lighter. They mount right on the ring rail and can be flipped back for doffing . . . And with all their superiority, they cost no more!

EASY TO INSTALL Simply drill and tap ring rail. We supply the shields and bar drilled to your gauge and ring count, together with proper support hangers and all screws and washers.



Tilt-Back Separators 15c up

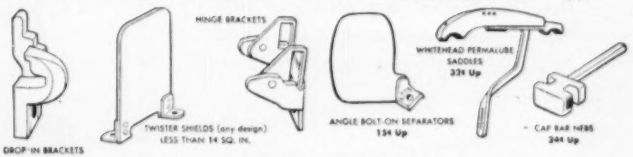
Stainless Steel Available for Rayon Spinning

EACH JOB ENGINEERED When ordering specify rail width, thickness of back flange, gauge and number of rings in each rail on one side only, as 24-22-22-22-24.

ONLY WHITEHEAD PERMALITE SHIELDS OFFER THESE ADVANTAGES

- Fewer ends down: some mills report 27% less
- Use of lighter travelers which reduce power costs, wear of rings and travelers
- Solid polished blades (not slotted) which cause less wear on yarn, collect less lint and fly, resulting in smoother yarn
- Less vibration, wear of cams, worm gears and lifter-rod bearings
- Reduction of live weight—from as much as 300 lbs in old slotted steel shield assemblies to as little as 35 lbs per frame
- No attention after installation

OVER 4,000,000 IN USE BY MORE THAN 350 AMERICAN MILLS


MINGE BRACKETS
WHITEHEAD PERMALUBE SADDLES 33¢ Up
DROP-IN BRACKETS
TWISTER SHIELDS (any design) LESS THAN 14 SQ. IN.
ANGLE BOLT-ON SEPARATORS 15¢ Up
CAP BAR NEBS 24¢ Up

IMMEDIATE DELIVERY FROM STOCK ON ALL ITEMS

PATENTED AND MANUFACTURED BY
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North Carolina
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Tennessee
Ed F. Brown, 417 Dale Ave., Knoxville, Tenn.
Northern Representative
Matthews Equipment Co., 93A Broadway, Providence, R. I.

A fastener AIN'T, if—
it works loose.

The "FLEXLOC" IS—
because it won't!

FLEXLOC

ONE-PIECE, ALL-METAL

STOP- and LOCK-NUT

Its "chuck-like", resilient locking segments lock the "FLEXLOC" securely in any position on a threaded member with a controlled, uniform and dependable torque.

Tough applications demonstrate that the "FLEXLOC" positively won't work loose", yet it can be removed easily with a wrench when desired. Because it is all-metal, temperatures as high as 550° F. hold no terrors for the "FLEXLOC".

The "FLEXLOC" has plenty of tensile . . . can be re-used many times . . . has therefore a long, effective life.

Write for further information

and free samples.

SPS STANDARD PRESSED STEEL CO.
JENKINTOWN 34, PENNSYLVANIA

CONSERVE YOUR QUILLS!

Use the

NASH "79" QUILL POLISHER

to relacquer worn quills

You need not discard your old loom bobbins because they are worn or have slight surface imperfections. They can be sanded smooth, and re-coated with finishing material.
If your quills are in good condition, the conventional way of using the Nash No. 79 with steel wool pads, special polish and burnishing pads will produce a perfect surface finish, preventing filament breakage or transfer of dirt to the yarn.
Failure of the finish coat calls for a complete re-finishing operation on the body of the quill, and the Nash relacquering attachment was developed to meet this need.

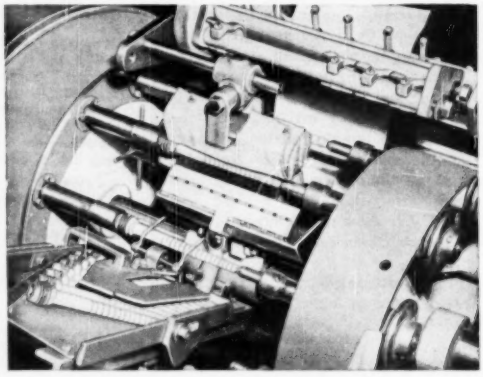
Lacquers 30 to 35 Quills Per Minute

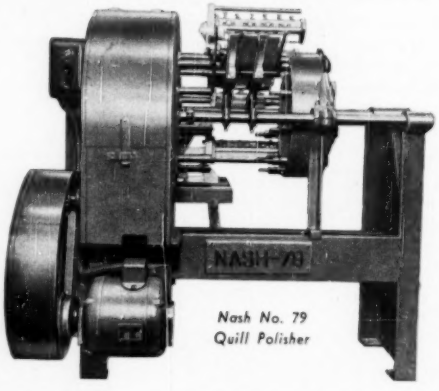
With the relacquering attachment just developed for use with the Nash No. 79 Quill Polisher, you can apply a new coat of Lacquer or else a shellac and oil finish—automatically at 30 to 35 bobbins per minute. The attachment is easily attached or removed.

Write for descriptive material on the Nash No. 79 Automatic Quill Polisher and Relacquering attachment.

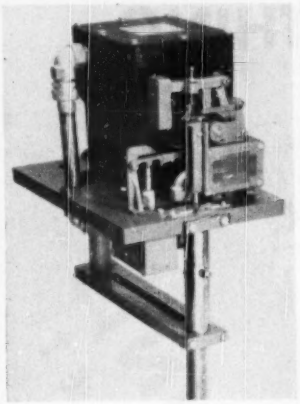
J. M. NASH COMPANY
2368 N. 30th Street, Milwaukee 10, Wisconsin

Close-up of Relacquering Attachment





Nash No. 79
Quill Polisher



VISCOMETER FOR EXPLOSION-PROOF APPLICATIONS

Shown here is the measuring element of a Viscometer developed for explosion proof applications meeting Class 1 Group D requirements.

It can be furnished with a recorder to provide viscosity process control either for manual operation with alarms, or for complete automatic control.

Norcross Corporation, 247 Newtonville Ave., Newton 58, Mass.

For additional data, request item L-113, using business reply card on page 196.

tion, the manufacturer claims.

Velvets for fashions and furnishings are said to become more luxurious because the novelty yarn gives the pile deeper appearance. Fur-like effects are among these developments. Various patterns in textured velvets are obtained with the new yarn in different fabric constructions.

Rayon Division, E. I. Du Pont de Nemours & Co., Inc., Wilmington, Del.

For additional data, request item L-111, using business reply card on page 196.

Union Special Announces Style 51400 BP Machine

A new addition to the Union Special line of 50000 Series industrial sewing machines is designated as Style 51400 BP, superseding Style 51400 P. It is specially designed for piecing sleeves, joining shoulders, and setting sleeves of shirts and similar garments with the two-needle, double locked stitch felled seam, Type 401-LSc-2.

Now in regular production, the machine is offered in standard gauges 6, 8, 10, 12, 16, and 18.

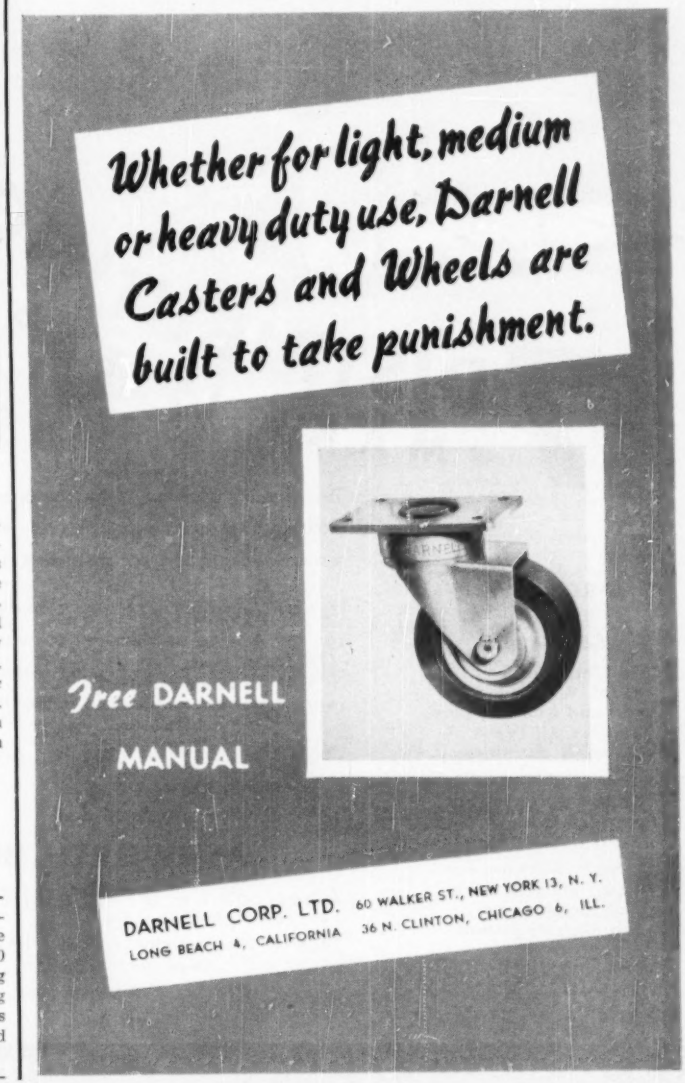
Among improved features offered are: Completely automatic lubrication from single reservoir; anti-friction bearings in feed lift, looper avoid, and feed drive permit greater speed, smoother operation with less wear; improved looper throw-out mechanism; new seize-resistant main bearing.

Union Special Machine Co., 407 N. Franklin St., Chicago 10, Ill.

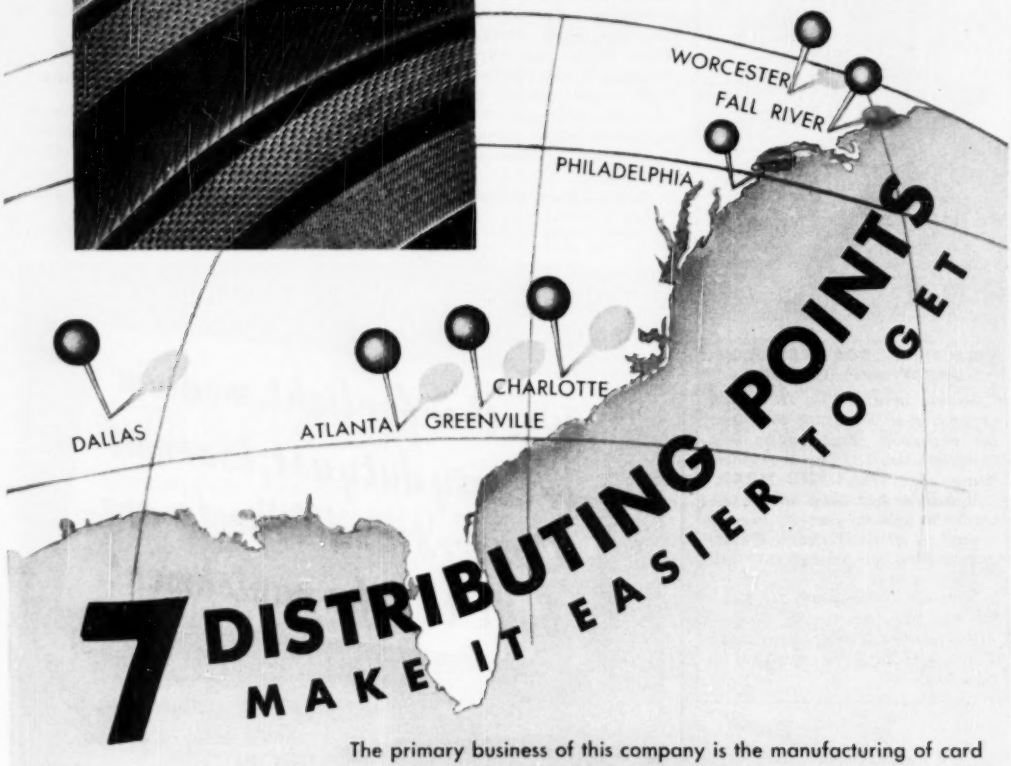
For additional data, request item L-115, using business reply card on page 196.

Portable Vacuum Cleaner

A small, portable vacuum cleaner, incorporating the heavy-duty advantages of larger machines, is identified as the Hoffco-Vac No. 15. The new cleaner is a 1½ hp machine which


Whether for light, medium or heavy duty use, Darnell Casters and Wheels are built to take punishment.
Free DARNELL MANUAL
DARNELL CORP. LTD.
LONG BEACH 4, CALIFORNIA
60 WALKER ST., NEW YORK 13, N. Y.
36 N. CLINTON, CHICAGO 6, ILL.

Ashworth CARD CLOTHING



7 DISTRIBUTING POINTS MAKE IT EASIER TO GET

PRODUCTS AND SERVICES

Card Clothing for Cotton, Wool, Worsted, Silk, Rayon and Asbestos Cards and for All Types of Napping Machinery.

Brusher Clothing and Card Clothing for Special Purposes. Lickerin Wire and Garnet Wire.

Sole Distributors for Platt's Metallic Wire, Lickerins and Top Flats Reclothed.

The primary business of this company is the manufacturing of card clothing and allied products and, with four widely separated factories, we can assure our customers of an uninterrupted supply.

However even the best card clothing isn't of much use unless you can get it when and where you want it. Therefore we have seven distributing points which make Ashworth Products easier to get in every important textile area in the United States.

Contact our nearest distributing point for your card clothing or card clothing service needs.

ASHWORTH BROS., INC.

American Card Clothing Co. (Woolen Division)

Fall River*†‡ Worcester*‡ Philadelphia*†‡ Atlanta†‡ Greenville*†‡
Charlotte†‡ Dallas†‡ (Textile Supply Co.)

4* FACTORIES • • • 6† REPAIR SHOPS • • • 7‡ DISTRIBUTING POINTS

*Factory †Repair Shop ‡Distributing Point

Hoffco-Vac No. 15 (U. S. Hoffman Machinery Corp.).

will operate one 35-foot length of vacuum cleaning hose. Over-all dimensions are compact to permit maneuverability of the cleaner in narrow aisles or congested areas.

Features claimed are as follows: Dust container has adequate capacity for continuous service; dust separator is fitted with four inverted-type filter bags; inlet to the dust separator is tangential (dust enters the separator below the bag plate level, to prevent any direct impact on bag); dust container is released by quick-acting lever and is equipped with handles for easy emptying.

Vacuum producer is of the multi-stage centrifugal type. Housing and impellers are of aluminum, with impeller balanced statically and dynamically.

Air Appliance Division U. S. Hoffman Machinery Corp., 105 Fourth Ave., New York 3, N. Y.

For additional data, request item L-114 using business reply card on page 196.

New Work Tray for Pedestal Hosiery Seamers

A new plastic work tray is being marketed for use in connection with Union Special Class 41300 pedestal hosiery seamers. In addition to the tray, which holds one dozen unseamed stockings, a rubber coated plate, for holding the stockings after they are seamed, is also available.

The tray is made of clear plastic with all edges polished to eliminate snagging of work. The rubber coated receiving plate is provided with two dowels for holding the tying cord so

Install the Walton SYSTEM

Requires simple electrical and water supply connections, provides most effective controlled distribution of humidity, needs far less maintenance, skill, time or expense.

FOR Spot, Booster OR Complete Automatic Humidification

Install WALTON for every humidification need. For spot, booster or automatic, zone-controlled systems WALTON offers dependable, economical performance featuring simplicity and ease of installation. WALTON Systems require no floor space—can be installed anywhere without loss of production time. Adaptable to areas with either high or low ceilings, WALTON Systems can be easily removed to new locations, quickly, at a minimum of cost. Investigate the many exclusive advantages offered by the WALTON Unit Humidification System—you'll agree it's the one practical choice.

NEW free booklet GIVES ALL THE FACTS

This informative illustrated catalog describes the many advantages of WALTON Humidifier Systems for the textile industry — Included are many typical installations. Copies are available now — MAIL COUPON TODAY.

WALTON LABORATORIES, INC. TI 12-50
IRVINGTON, NEW JERSEY

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The Hayssen gives you better wrapping at lower cost.

Fully automatic—it replaces costly hand wrapping.

Provides exact registration of printed overwraps.

Operates quietly at a high production rate.

Gives you dependable performance and long service.

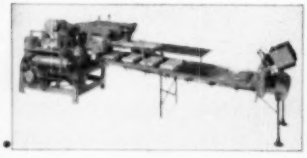
Is backed by 40 years of wrapping machine experience.

Write to the factory today for complete information.

HAYSSEN MFG. COMPANY . . . SHEBOYGAN, WIS.

Hayssen ELECTRIC EYE WRAPPING MACHINES

IT PAYS TO WRAP THE HAYSSEN WAY



in card clothing, too..

sharp points yield longer runs

Carders who use Wissco Hardened Point Clothing find that it gives them longer runs between grindings . . . actually cuts grinding time by as much as 50%.

That's because after this superior Wissco Clothing has been precision set, it is ground to an accuracy of ½ of a thousandth of an inch, then hardened by a special Wissco process . . . thus assuring points that stay smooth and sharp.

A trial run will show you why more and more mills are standardizing on Wissco Hardened Point Clothing. Write today for detailed information.

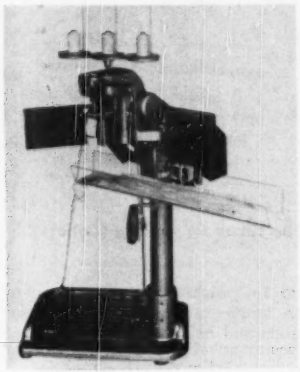
Sales Office and Plant: 56 Sterling St., Clinton, Mass.
Executive Office: 500 Fifth Avenue, New York 18, N. Y.
District Offices: Atlanta, Boston, Buffalo, Chicago, Detroit, Denver, New York, Philadelphia.
Pacific Coast: The California Wire Cloth Corporation, Oakland 6, Cal.

Wissco CARD AND NAPPER CLOTHING

FOR COTTON, RAYON, WOOL, WORSTED, ASBESTOS AND SPECIALTIES

CF&I

A Product of Wickwire Spencer Steel Division of The Colorado Fuel And Iron Corporation



Pedestal seamer with new work tray (Union Special).

that the stockings do not have to be touched in tying together after being seamed. Both tray and plate are adjustable to the most desirable height and angle.

Union Special Machine Co., 407 N. Franklin St., Chicago 10, Ill.

For additional data, request item L-116, using business reply card on page 196.

New Textile Books Now Available

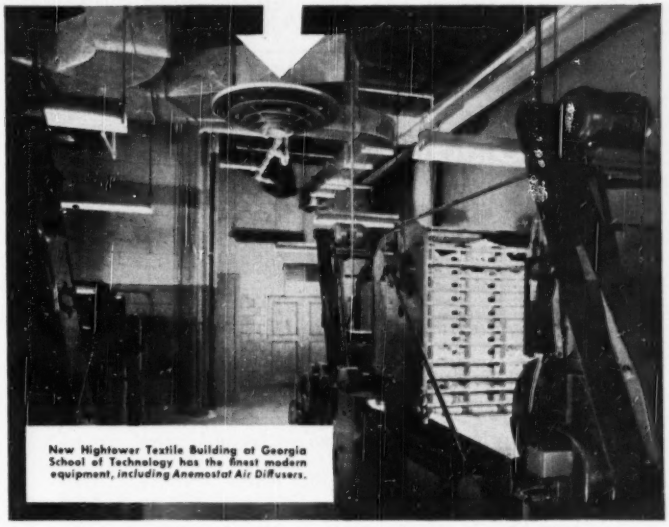
The Saco-Lowell Shops, a new book by George Sweet Gibb, traces the industrial development of New England from 1913 through 1949. The story of these New England machine builders throws new light on a region whose industrial strengths and weaknesses are so much in the news today. Together, *The Saco-Lowell Shops* and *The Whitin Machine Works* (reviewed in the October 1950 issue of TEXTILE INDUSTRIES) give an excellent picture of the industry. The two volumes supplement rather than overlap each other. Published by the Harvard University Press, Cambridge 38, Mass. Price $7.50.

Shoddy and Mungo Manufacture, by N. C. Gee, is a comprehensive study of this important section of the textile trade. The book is timely in view of the ever-widening range of raw materials and the increasing use of man-made fibers. Available from Emmott & Co., Limited, 31 King Street West, Manchester 3, England.

for better fiber control...

ANEMOSTAT AIR DIFFUSERS

One of the most important factors in the quality control of fibers is putting the *right* quantity of properly conditioned air *exactly where* you need it.



New Hightower Textile Building at Georgia School of Technology has the finest modern equipment, including Anemostat Air Diffusers.

Scientifically designed Anemostat Air Diffusers accomplish this by distributing any volume of cooled or heated air in predetermined patterns . . . *without drafts.* Anemostats equalize temperature within the occupancy zone to plus or minus one degree and equalize relative humidity as well.

You can also use Anemostat Air Diffusers for spot cooling to neutralize machine heat loads. They are adaptable, too, to zone control of special areas. Anemostat's wide range of designs—including adjustable diffusers—assure flexible and perfectly balanced installations.

SPECIAL BULLETIN 32 tells the full story on the application of **ANEMOSTAT AIR DIFFUSERS** to textile manufacturing and processing. Write for your copy.

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DRAFTLESS *Aspirating* AIR DIFFUSERS

ANEMOSTAT CORPORATION OF AMERICA

10 EAST 39th STREET, NEW YORK 16, N. Y.

REPRESENTATIVES IN PRINCIPAL CITIES

"NO AIR CONDITIONING SYSTEM IS BETTER THAN ITS AIR DISTRIBUTION" AC-1354

Slip Clutch for Winding Operations

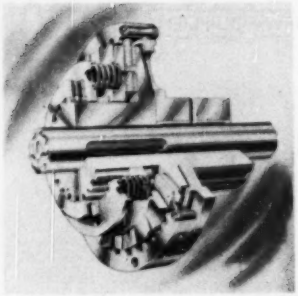
A new slip clutch has been designed to help solve the problem of maintaining constant tension or constant torque on winding operations. This new slip clutch is recommended for use also as a safety device for overload protection or to maintain constant torque regardless of driving speed.

Special features include ventilated plates, cooling fins, and pressure springs with long deflection range for accurate adjustment. Single, double, and triple plate construction is available. When the function is constant tension, the regular adjusting nut is replaced with a sliding collar to permit adjustment while the unit is in operation.

The clutches are offered in sizes from 2⅜" diameter to 27" diameter with torque range up to 10,000 foot pounds and heat capacity up to 8½ hp.

Hilliard Corp., Elmira, N. Y.

For additional data, request item L-106, using business reply card on page 196.



Slip clutch for winding (Hilliard).

CROSSETT *offers you:*

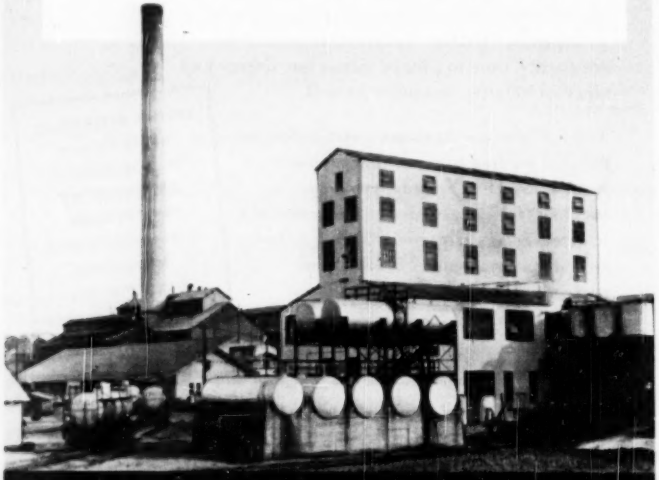
★ ACETIC ACID.. *in high quality technical grade, standard strength solutions of 28%-56%-80%-84% and glacial acid, shipped in aluminum tank cars or in barrels.*

★ METHANOL, or METHYL ALCOHOL

is delivered to you in 54-gal. steel drums

Prices are competitive with your nearest source. Shipment within 24 hours after receipt of your order. Our 20 years of "know how" is your guarantee of reliable service.

LOCATED CENTRALLY IN THE SOUTH



CROSSETT CHEMICAL COMPANY
CROSSETT, ARKANSAS

SRM Magazine Creel Has New Features

The SRM Magazine Creel currently being manufactured incorporates a number of new features not found on the model introduced earlier this year.

New and greatly improved electromagnetic stop motions give even faster action and require no adjustment. Ballooning space can be varied, depending on the type of yarn to be processed on the machine.

The double post disc type tension unit with the recessed hex head posts have been retained and improved with a new and more quickly adjusted bracket. Swing arms are now available with a special revolving spindle that permits the use of spinning bobbins as well as combs, should such be desired.

Edward J. McBride Co., Inc., Adams Ave. and Leiper St., Philadelphia 24, Pa.

For additional data, request item L-117, using business reply card on page 196.

Adapter for Viscometer for Low Viscosity Ranges

A special attachment for Brookfield Model LV viscometer that makes possible extremely precise measurements in ultra-low viscosity ranges is designated as the UL Adapter.

It consists essentially of a cylindrical spindle mounted symmetrically within a concentric tube. When attached to the Model LV viscometer, it gives full scale (13½") deflections,

representing 10 centipoises at 60 rpm, 20 centipoises at 30 rpm, 50 centipoises at 12 rpm, and 100 centipoises at 6 rpm.

Thus, because of the amplifying effects provided, when measuring viscosities within the range of 0 to 10 centipoises, reproducibility within .02 centipoises is obtainable.

Brookfield Engineering Laboratories, Stoughton, Mass.

For additional data, request item L-105, using business reply card on page 196.

TEXTILE MILL HUMIDIFIER

This new humidifier for textile mills uses plant steam and well water, one part steam and six parts water.

The solids in hard water are atomized as fine as smoke.

Each nozzle has nine jets which have an output of 200 lb of vapor per hour and will take care of 50,000 cu ft, with a relative humidity as high as 95%. The jets in the nozzle are self-cleaning; every time the solenoid valve opens and closes the jets are automatically cleaned, preventing the jets from becoming clogged.

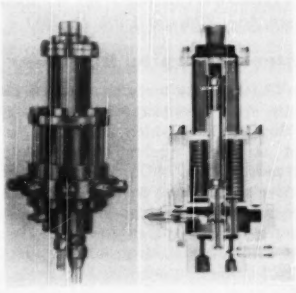
Humidity is controlled by a humidistat and held at close tolerances. At least 2% temperature drop can be expected.

The solenoid valve has a bellows in place of a piston; therefore, the valve will not stick open or closed.

All wearing parts are made of stainless steel.

Hoppe Engineering Co., Greensboro, Ind.

For additional data, request item L-102, using business reply card on page 196.



25-YEAR-OLD "Buffalo" DRAFT FANS PROVE THE ECONOMY of DURABILITY

● Wherever steam is produced for energy, you find a key industry. In every key industry you find "Buffalo" Mechanical Draft Fans represented—and doing a reliable job of keeping boiler combustion efficient.

In the Public Utility companies, where above all, power production must be continuous, "Buffalo" Draft Fans are proving that they can be relied on for remarkably long service periods.

The 24 "Buffalo" Draft Fans at Miami Fort Station, Cincinnati Gas & Electric Company, illustrate this durability. They are still in service after 25 years on industry's toughest fan job.

If you want the draft economy that comes only from rugged fan construction in the right places, specify "Buffalo". WRITE FOR BULLETIN 3750 for all engineering details.

"Buffalo" First For Fans

BUFFALO "Buffalo" FORGE COMPANY
175 MORTIMER STREET BUFFALO, NEW YORK
Canadian Blower & Forge Co., Ltd., Kitchener, Ont.
Branch Offices in All Principal Cities

VENTILATING FORCED DRAFT · AIR WASHING COOLING · AIR TEMPERING HEATING · INDUCED DRAFT PRESSURE BLOWING · EXHAUSTING

High Capacity Chlorinizer

The new HCVS High Capacity Chlorinizer has, in addition to the visible gas flow feature, automatic control to provide chlorine to three points of application. Not only is the feed rate automatically controlled, but also the sequence of point of application is selected.

Builders-Providence, Inc., Providence, R. I. (L-202).

Aluminum Alloy Pallet Lift Truck

Featuring special wheels that retract when the forks are in a lowered position, an aluminum alloy pallet lift truck can be turned around "on a dime," according to the manufacturer. Rear wheels are one inch above the floor and thereby enter and leave the pallet without interference or damage to the bottom boards. Operating the lifting handle automatically brings rear load wheels down to the floor and raises auxiliary wheels.

Market Forge Co., Everett, Mass. (L-203).

NON-FLUID OIL

TRADE MARK REGISTERED

PROTECTS AGAINST "OIL SPOT" DAMAGE

FROM CARDS TO LOOMS

That's the story in a capsule. NON-FLUID OIL stays in bearings until entirely used up—instead of dripping, spattering and throwing like ordinary oil. It not only prevents oil spots, but goes 3 to 5 times as far as liquid oils, reducing oil and application cost.

We are prepared to furnish mills with skilled engineering service. Write for informative bulletin and free testing sample of NON-FLUID OIL.

NEW YORK & NEW JERSEY LUBRICANT CO.

292 MADISON AVE., NEW YORK 17, N. Y.—WORKS: NEWARK, N. J.
Southern District Manager: Falls L. Thomason, Charlotte, N. C.
WAREHOUSES: Atlanta, Ga. — Birmingham, Ala. — Charlotte, N. C. — Chicago, Ill. — Columbus, Ga. — Detroit, Mich. — Greensboro, N. C. — Greenville, S. C. — Providence, R. I. — St. Louis, Mo.

DON'T YOU BELIEVE IT! If anyone approaches you with products they swear to be exact imitations of NON-FLUID OIL, at a lower price, don't you believe it! The basic factors in all industrial production preclude paying a little and getting a lot . . . Remember, you only get what you pay for!

NON-FLUID OIL is not the name of a general class of lubricants, but is a specific product of our manufacture. So-called grease imitations of NON-FLUID OIL often prove dangerous and costly to use.

Right Angle Speed Reducer

Greater rigidity, strength, and motor adaptability are features claimed for the new all-steel right angle Motoreducer which combines the advantages of the standard Falk Motoreducer with the adaptable right angle head. It can be used for either horizontal or vertical applications and is available with output shaft single or double ended. Furnished in either self-contained motor construction or a type which accommodates any foot-mounted motor.

The Falk Corp., Milwaukee 8, Wis. (L-204).

Midget Belt Type Dry Chemical Feeder

The Model 50-8 Midget Belt Gravimetric Feeder, which feeds dry chemicals continuously by weight, has an 8-inch belt with a one foot weigh span and a capacity of 3 cu ft per minute. Features: High accuracy, feeding range of 100 to 1, positive non-flooding feeding mechanism in stainless steel, infinitely variable speed transmission, hopper agitation proportional to feed rate, and automatic alarm device.

Omega Machine Co., 345 Harris Ave., Providence, R. I. (L-205).

Packaged Power Unit

Consisting of a compact, enclosed helical gear drive with separate standard motor, flexibly coupled and mounted on one welded steel base plate, the Link-Belt Motogear is built in a variety of sizes, in double or triple reductions, and in a wide range of ratios and horsepowers. A movable plate between motor feet and base plate provides for convenient adjustment, should shaft alignment become necessary. Input and output shafts are concentrically in line.

Link-Belt Company, 307 N. Michigan Ave., Chicago 1, Ill. (L-206).

Steel Strapping Dispenser

Chief among features of a new mobile steel strapping dispenser is the "Straptroller" which keeps the flow of strapping under control at all times, without backlash, and without interference from too much slack. An easy pull feeds strap smoothly. Dispenser cannot roll in direction of pull of strap because strap is dispensed at right angles to wheels. Full reels of strapping are easily loaded into dispenser when it is lying down. May

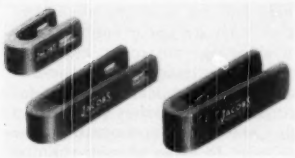
be used in vertical or horizontal positions.

Signode Steel Strapping Co., 2600 N. Western Ave., Chicago 47, Ill. (L-207).

Molded Lug Straps

A complete line of rubber and cotton fabric composition lug straps, known as Jacobs "Verybest" Rubberweld Lug Straps, has been placed on the market.

Due to the molded construction of the lug straps, they are more uniform than other straps made of rubber and fabric, according to the manufacturer. Stable pick action, fewer loom adjustments, and longer uninterrupted service, are other advantages claimed.



Jacobs lug straps.

The Bullard Clark Company, E. H. Jacobs Northern Division, Danielson, Conn.; E. H. Jacobs Southern Division, Charlotte, N. C.

For additional data, request item L-119, using business reply card on page 196.

Book for Management on Bargaining with Unions

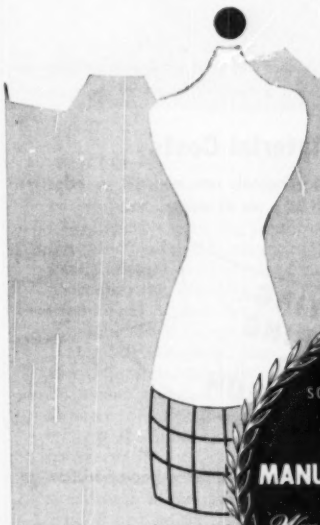
A book "Management Strategy in Collective Bargaining Negotiations" has been published by the National Foremen's Institute, Inc. (price, $5.00). According to the publisher, the 198-page book by William J. Baade, Jr., and Morris Stone is a practical working reference, giving employers and management negotiators information on how to execute contracts that promote peaceful labor relations and that at the same time permit efficient business operations.

Waterproof Outlet Box

The Greenbilt Type 6005 Waterproof Outlet Box provides five interruption-proof, all-weather electrical outlets from one inlet. Wiring from the inlet to all outlet receptacles is symmetrical. Each outlet will conservatively carry 1500 watts

Greater efficiency of LAUREL soaps, oils, finishes keeps your wet processing costs down—

Whether for fashion or industry, your yarns or fabrics will win greater favor, give greater service . . . and cost you less when they're processed with Laurel soaps, oils, finishes. Scientifically developed, laboratory- and mill-tested, these quality Laurel wet processing agents are pure, uniform, dependable. Only top grade raw materials are used. Since 1909 important wet processors have found Laurel processing agents yield smoother, more efficient production, more salable finished products. Take advantage of Laurel's wet processing experience. Write or call the Laurel Technicians for recommendations.



Laurel Synthetic Detergents • Laurel Hydrosol • Laurel Wool Oils • Hydrocop • 3B Softener Laurel Rayon Oils Laurel Nynit C Laurel Hosiery Finishes • Laureltex Transfer Remover Laurel Knitting Machine Oil

textile soaps, oils, finishes

LAUREL SOAP MANUFACTURING CO., Inc.

Wm. H. Bertolet's Sons

ESTABLISHED 1909

2603 E. TIOGA STREET
Philadelphia 34, Pa.

Warehouses:
Paterson, N. J.
Charlotte, N. C.
Chattanooga, Tenn.

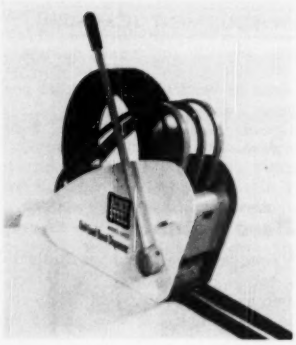
and the inlet receptacle is rated at 6,000 watts, all at 115 volts. May be used on a-c or d-c.

Equipment and Service Co., 6815 Oriole Drive, Dallas, Texas. (L-208).

Set-Screw Type Wire Connector

A wire connector recently made available consists of a brass sleeve into which electric wires are slipped and then fastened firmly by tightening down a brass setscrew. A phenolic insulating shell is then screwed over the brass sleeve to complete the connection and provide a wire splice with extra high safety factors, according to the manufacturer. Recommended for use on conduit, armored cable, non-metallic cable, and open wiring. Approved for 600-volt joints. Two sizes: No. 11 and No. 22.

Ideal Industries, Inc., Sycamore, Ill. (L-201).



Unit-Load Band Dispenser

Stationary and portable models of a new dispenser for Unit-Load Band are now being marketed. Both models hold and cut to length one or two coils of steel strapping used to reinforce shipping containers, etc. According to the manufacturer, the dispenser speeds application of cut-to-length strapping. Bands are cut in a single, low-effort downstroke of a hand lever. Problem of over-running band is minimized by V-belt controlled feed. Shear mechanism features tool steel blades, easily accessible for service or replacement.

Department PX, Acme Steel Co., 2840 Archer Ave., Chicago 8, Ill. (L-209).

Tube Rolling Control

A simplified control for rolling ferrous and non-ferrous tubing eliminates over-expanding and under-expanding of tube ends, tube end thinning, and radial and hoop stresses in tube sheet, according to the manufacturer. There are only two working parts; unit is light in weight; alignment is automatic; no maintenance required.

Crane Packing Co., 1800 Cuyler Ave., Chicago 13, Ill. (L-210).

New Package Type Steam Generator

Available in pressures of 15 to 200 psi, a new package type steam generator has the versatility of being fired either with light oil, heavy oil, or gas, and the combination of gas and oil operation. It comes fully equipped with an integral burner, fully automatic safety and operating controls, steam trim, valves, etc. Unit is ready to operate upon arrival at site, the only connections being required are water, steam, fuel, and electric.

Cyclotherm Corp., Oswego, N. Y. (L-211).

Cleans Machinery ..... Fast

Jarrett's META-CLEAN

... and Saves 3 Ways

1 On Cleaning Labor

Removes oil, grease, lint, and dirt in a fraction of the time ordinarily required . . . in 1/3, 1/2, and in one important case on record, in 1/7 the former time.

2 On Downtime

Equipment is thoroughly cleaned and back into production in short order . . . giving increased hours of production.

3 On Cleaning Material Costs

Jarrett's Meta-Clean is extremely economical . . . effective even when diluted with 20 parts of water.

For SPRAYING BRUSHING WIPING IMMERSION

Odorless
Non-flammable
Harmless to skin

Used in many leading mills. Write for a demonstration on your equipment.

CECIL H. JARRETT COMPANY, INC.
Manufacturer & Distributor of Chemicals and Supplies, Newton, N. C.

SUPPLIERS AND MANUFACTURERS OF HEAVY CHEMICALS, SOAPS, DISINFECTANTS, FLOOR WAXES, CLEANERS AND SEALERS, INSECTICIDES, FLOOR MACHINES, PAPER GOODS AND JANITORIAL SUPPLIES

PERSONAL NOTES
ABOUT MEN YOU KNOW

Mark Sears has left Moosehead Woolen Mills to become overseer of carding at Gay Bros., Cavendish, Vt. Also at Gay Bros. is **Frederick Duffy,** formerly overseer of finishing at Lincoln Mills, Pascoag, R. I.

Charles Forest has been made superintendent at Thomas Woolen Mills, Ludlow, Vt.

Previously night superintendent at Cleveland (O.) Worsted Mills, **M. H. Behrendt** is now with Worth Bros., Los Angeles, Calif., in a similar capacity.

Maurice J. Lowenthal, associated with M. Lowenstein & Sons, Inc., for the past twenty-two years, was recently elected an assistant vice-president. Mr. Lowenthal heads the grey goods purchasing department.

As executive assistant to Mack Kahn, president of Kanmak Textiles, Inc., **Joseph A. Lopez** will be concerned chiefly with the production and development of various synthetic fabrics. Before going with Kanmak, Mr. Lopez was with the nylon division of E. I. du Pont de Nemours & Co., Inc.

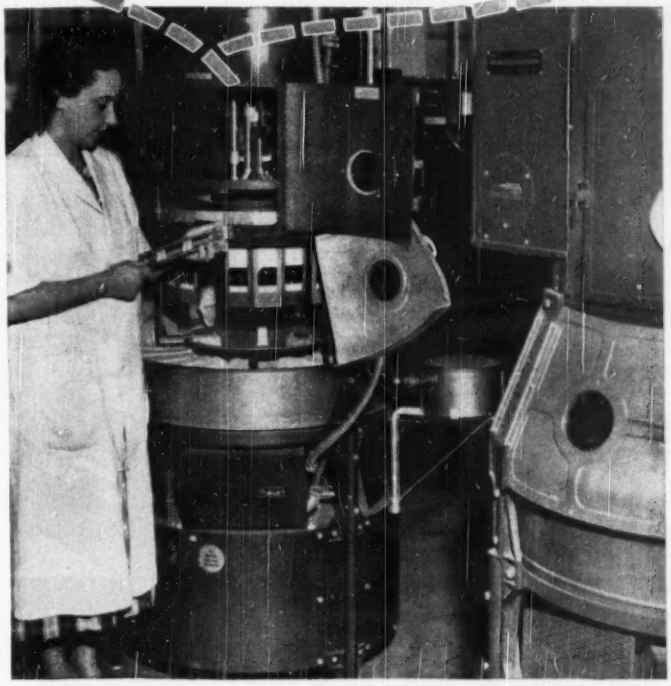
Formerly production manager of the Chatham Manufacturing Co., Elkin, N. C., **Robert H. Lankford, Jr.,** was recently promoted to the post of assistant to general superintendent Fred L. Neaves. Mr. Lankford has been with Chatham since 1931. **Walter C. Mentz,** who was assistant production manager, has been promoted to the position of production manager.

C. C. Dawson, manager of Burlington Mills Cramerton division, Greensboro, N. C., and associated with the textile business for 42 years, has announced his retirement, effective January 1. He will be succeeded by **G. T. Gardner,** formerly assistant manager.

Atlantic Manufacturing Co., Inc., New Bedford, Mass., has announced the appointment as treasurer of **Harold N. Reich.** This firm is a division of Columbia Weaving Co.

John R. Kimberly, vice-president of International Cellucotton Products Co., has been elected president of Berkeley Mills, Inc., Balfour, N. C., a

ATLAS-OMETERS
. . . helping to maintain famous Bur-Mil quality



Atlas Fade-Ometers and Launder-Ometers are in constant use in the modern laboratories of the Burlington Mills Corporation, serving two important functions—quality control and progressive research.

To assure unvarying quality in daily production, fabric samples from each phase of processing are subjected to exhaustive tests in Fade-Ometers and Launder-Ometers. These tests help to determine color fastness, bleeding, shrinking, and resistance to washing and mechanical action. Samples that fall short of the high Bur-Mil standard result in rejection of the entire lot.

Bur-Mil designers, also, use these Atlas-Ometers when experimenting with new fabrics. Because the Fade-Ometer so accurately duplicates the deteriorating effects of sunlight, and the Launder-Ometer the effects of commercial laundering, designers can ascertain in the laboratory whether fabrics will withstand actual use satisfactorily.

The machines are adaptable to a wide range of products. They are simple to operate, and may safely be left in continuous, unattended operation.

ATLAS ELECTRIC DEVICES COMPANY
361 West Superior St., Chicago 10, Ill.
WEATHER-OMETERS • FADE-OMETERS • LAUNDER-OMETERS

subsidiary of International. **H. T. Rindal,** general manager of Berkeley since 1946, was made secretary.

W. L. Medlin has succeeded **R. L. Towe,** resigned, as secretary of the Roanoke Mills Co., Inc., Patterson Mills Co., Inc., and Rosemary Manufacturing Co., textile divisions of Simmons Co.

After 17 years with Jordan Mills, Inc., Columbus, Ga., **C. L. Pierce** recently resigned. His office as treasurer will be filled by **Roy Thurmond,** and **Harold Ruff** will replace Mr. Thurmond as secretary. In addition to these duties, Mr. Ruff will continue as purchasing agent.

The Textile Institute, Manchester, England, has announced the election of the following members to Fellowship in the Institute: **Lyman E. Fourt,** research associate with the Harris Research Laboratories, Washington, D. C.; **Rogers B. Finch,** assistant professor, textile division, Massachusetts Institute of Technology, Cambridge, Mass.; and **H. F. Mark,** professor of organic chemistry, Institute of Polymer Research, Polytechnic Institute of Brooklyn, N. Y.

Gardner M. Hailes, formerly with Taylor Instrument Co., Rochester, N. Y., has joined Avondale Mills as quality control manager. Mr. Hailes' headquarters will be at the laboratory in Sylacauga, Alabama.

At a recent meeting of the board of directors of West Point Manufacturing Co., **Ralph G. Boyd** was elected president to succeed **Carleton R. Richmond,** who became chairman of the board. **Henry S. Grew,** chairman of the board for many years, was elected chairman of the executive committee, and **Elwyn G. Preston, Jr.,** assistant treasurer, was made treasurer.

Mr. Boyd

Mr. Richmond

The Ontario Labor Relations Board has announced the appointment of **H. F. Irwin** as a member to succeed the late William J. Corbett. Mr. Irwin is director of industrial relations, Primary Textiles Institute, Toronto, Ontario.

Harold Wade Coryell has joined the staff of the Southern Regional Research Laboratory, U. S. Department of Agriculture, New Orleans, La., as technical analyst. Mr. Coryell will assist in the prosecution of patent applications covering research discoveries on the utilization of farm crops.

At a recent board meeting, **Harold T. Marshall** and **John A. Lunn** were elected vice-presidents of The Kendall Co., Walpole, Mass. Mr. Marshall has been with the company since 1926, while Mr. Lunn recently joined the organization as director of manufacturing.

Emmett F. Williams, formerly with Wamsutta Mills, has joined Dan River Mills, Inc., Danville, Va.

L. G. Fisher, superintendent of weaving at the Gerrish-Milliken plant at Pendleton, S. C., will be superintendent of the Kingsley Mill at Thomson, Ga., now under construction.

We're doing our dead level best!

Running a steel warehouse is tough enough in normal times. But today it is really tough.

We're on the phone, burning up the telegraph lines, or running the special delivery boys ragged, day in and day out, trying to get materials for you. And we are handling orders just as rapidly as we can.

We're doing our dead level best to meet the needs of our customers, and we'll never stop trying.

One thing we are asking of our customers is that they order only what they actually need. Stockpiling is out. Government orders restrict inventories to normal requirements.

By full cooperation on everybody's part, all of us will fare better.

WAREHOUSE DIVISION
Atlantic Steel Company
ATLANTA, GEORGIA • EMERSON 3451

The Kingsley Mill will be a part of the Judson division of Deering, Milliken & Co., Inc.

Robbins (N. C.) Cloth Mills have announced the appointment of **Irving Layton** as an assistant vice-president Mr. Layton has been with the firm since 1947.

Leonard Roberts, formerly assistant manager at Linen Thread Co.'s Blue Mountain plant, is now associated with the Classe Ribbon Co., Anniston, Ala.

At the recent annual meeting of the North Carolina Cotton Manufacturers Association, Inc., **Julian Robertson** was made president, succeeding **Frank C. Williams,** Patterson Mills Co. Mr. Robertson is president and treasurer of North Carolina Finishing Co., Salisbury, N. C.

A. Meikle, superintendent of the Roanoke Rapids, N. C., plant of Patterson Mills Co. for the past 21 years, has retired.

Reeves Bros., Inc., New York, N. Y., has announced the promotion of **Gabe C. Hill** as controller of the company's southern plants. **J. H. Wyatt, Jr.,** is now assistant treasurer, having been promoted to that position from superintendent of Chesnee Mills. **W. C. Ariail** leaves Grace Cotton Mills Co. to become superintendent at Chesnee, and **S. C. Murdock,** formerly at Mills Mill No. 1, Greenville, S. C., has succeeded Mr. Ariail.

At a recent meeting of the board of directors, **Kenneth R. Fox** and **Donald Cook** were elected additional vice-presidents of Burlington Mills Corp. Mr. Fox, now technical director at Burlington, is a former president of Lowell Textile Institute. Mr. Cook, former director of personnel for Montgomery, Ward & Co., will be responsible for Burlington Mills' personnel program. The firm also announced the appointment of **E. C. Atwell,** previously with Textron, Inc., as head of the technical services section of the Burlington Mills laboratory. **J. Raymond Timmerman** has succeeded Russell B. Gunn, resigned, as superintendent of the firm's Modena plant in Gastonia, N. C.

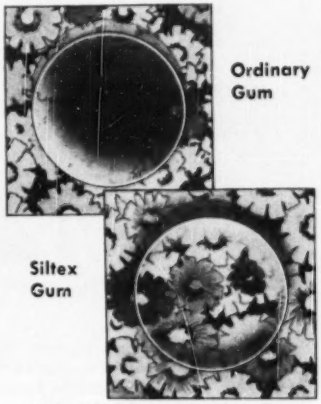
In recognition of his fifty years of service to the firm and to the textile industry, **Kemp P. Lewis,** chairman of the board of Erwin Mills, Inc., Durham, N. C., was recently honored at a testimonial dinner.

R. B. Fort, Jr., formerly assistant to the manager of the Shelbyville, Tenn., mills of United States Rubber Co., has been made assistant to the manager of Stark and Reid Mills, Ho-

Newsworthy onyx Chemicals
FOR TEXTILE PROCESSING

The Standard of Comparison on Printing Gums

Onyx Siltex Gum, Superconcentrated, is not a new product . . . but it is newsworthy because of its superior performance and the advantages it offers the textile printer in this busy season.



Compare the darkening and muddying effect of ordinary printing gum on the upper watch crystal with the clarity and transparency of Siltex Gums on the lower crystal.

Siltex Gum, Superconcentrated, is the most effective printing gum available. It is the standard of comparison in checking results from all other gums. It insures purer whites and better color yield, because it is completely transparent and virtually water-white. It is a perfect gum for fine line work

Lime-free, this gum has no grit to damage rolls or doctor blades. It gives you perfect penetration. It does not froth during runs, and does not thin out, retaining its exceptionally high viscosity all the way. It is also highly soluble, and can be washed out easily in cold water.

Four parts of Siltex Gum, Superconcentrated, do the work of five parts of ordinary gum.

If you want whiter whites and brighter, clearer colors, sharply and evenly defined, give Siltex Gum a thorough tryout.

If Shortages Hit You . . .

There may not be any serious shortages of natural oils and finishing materials, but some kind of lean supply in these products seems possible. Remember that for many years Onyx has been duplicating hands and finishes with synthetic products which were normally obtained from natural materials. For example, the Onyxsans have been providing a wider range of hands for cotton, rayon, acetate and bemberg than any natural oils could give, with the added advantage of permanence of finish. A shortage of natural glues and gelatines can be met with the Xyno Resins to get a wide range of finishing effects, in many ways superior to those of the natural products.

Shortages of natural oils and finishes may not be as unpleasant as it may seem on first thought. You may well discover, as many other mills did during the last war, that synthetic products can do a much better job for you cost-wise, as well as quality-wise. We can recommend the materials that will give you the hands and finishes you want.

For One-Bath Desizing

Occonaze LH is a proteolytic and amylotic enzyme in a buffered, stabilized formula, supplied in powder form. High bath temperatures can be used to speed up the desizing operation materially, because Occonaze LH offers the highest available degree of heat stability. It is particularly adapted to continuous desizing, but on either batch or continuous work, you will get clean results, without streaking or blemishes.

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LAWLOR
The adjustable handle makes it possible to scrub and wax polish in congested places where hand cleaning had been necessary before — around and under machines, counters, desks, lockers, etc.
Operator can raise or lower handle to any angle within an 80 degree arc and shove the Lawlor under any equipment where there is at least a 9½ inch opening and as far back as 4½ feet.
Three Models—
A size to suit
every need

ANOTHER POPULAR LAWLOR

The Model 20-D is designed for large areas. It does everything in one operation: deposits clean water over the soaped floor, a 19" revolving brush scrubs it thoroughly; then a rubber squeegee mops up the dirty water, which is vacuum pumped into a second tank. The Model 20-D is only 22" wide and can be used around machines and equipment. The nice thing is that one person can easily operate it.

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Quality built of all steel with perforated rolls. Foot lever operation. Made for one or two pails.

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gansville, Ga. Mr. Fort began his career with the company at the Stark Mills in 1938 and later was transferred to other plants.

The recent division of the research and development department of Alexander Smith & Sons Carpet Co. into seven major divisions has entailed the following personnel changes: **Leo W. Rainard,** formerly in charge of the chemical research division, is now assistant director of research; **Edmund A. Leonard,** formerly assistant manager of the technical laboratories division, has been made manager; **O. P. Beckwith,** formerly in charge of this division, has been appointed assistant director of the newly organized quality control department. **George N. Dreisch** replaces J. H. Pfau, resigned, as manager of the mechanical research division; **Joseph L. Barach** will continue as manager of the physical research division; **Emery P. Mersereau** will supervise the chemical research; and **Allen R. Winch** has been appointed supervisor of the analytical section of the technical laboratories division.

Mr. Rainard

Mr. Leonard

At the Quartermaster Association banquet in Philadelphia, Pa., early in October, **Roy A. Cheney,** president of the Underwear Institute, and retiring president of the Association, was presented with the Certificate of Merit, an honor rarely bestowed by the Quartermaster Association. It was given in recognition of distinguished service in the interest of the organization. **Col. Paul P. Logan,** QMC, retired, is the newly elected president of the association.

At the annual meeting of the Philadelphia Textile Manufacturers Association, **Lindsey H. Mason** of S & M Dye Works, Inc., was re-elected to a third term as president of the organization. **R. Emerson Putney,** Philadelphia Felt Co., was elected first vice-president; **Alfred A. Forster,** Clifton Yarn Mills, Inc., formerly first vice-president, was named second vice-president, and **Edwin G. Michie,** A. Y. Michie & Sons, was elected treasurer. **William J. Maurer,** F. W. Maurer & Sons Co., was re-elected secretary.

Frank Cooper, Jr., was recently made assistant superintendent at Wilmington (Del.) Hosiery Mills, Inc.

Wayne J. Holman, formerly vice-president of Chicopee Mills, Inc., the sales organization for Chicopee Manufacturing Corps., has been elevated to president of Chicopee Mills, Inc. **G. O. Lienhard,** formerly president of Chicopee Mills, Inc., and Chicopee Manufacturing Corps., has become chairman of the board of the sales organization, Chicopee Mills, Inc., and remains as president of Chicopee Manufacturing Corps.

Obituaries

George W. Hamilton, president of Crown Cotton Mills, Dalton, Ga., died recently as a result of a heart ailment. Mr. Hamilton's family founded the mills in 1884.

Jacob Ziskind, 51, owner of Crescent Corp., Fall River, Mass., Merrimack Manufacturing Co., Lowell, Mass., and other textile firms, died suddenly on October 18.

After an illness of several months, **Harry W. Lazarus,** 62, passed away. Mr. Lazarus was president of Century Hosiery Co. and had been in the hosiery business since 1912.

Harlan F. Brown, 59, vice-president and assistant superintendent of Theme Hosiery Co., Inc., Los Angeles, Calif., died suddenly.

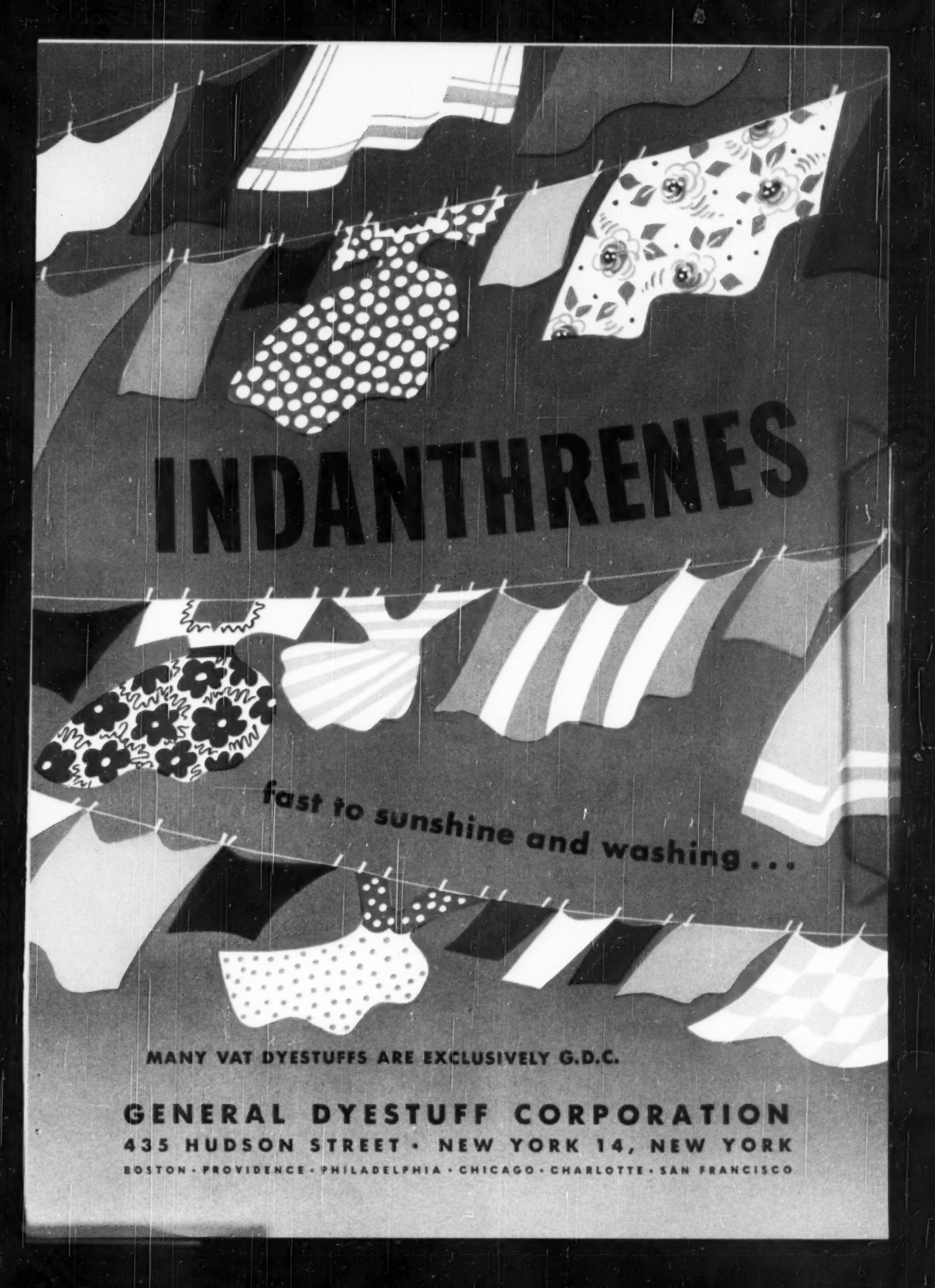
Early in October **Alton T. Jenkins, Sr.,** head of the cotton department of Thomaston (Ga.) Mills, passed away.

George O. Lipe, 76, president of Linn Mills, died on October 26 in Landis, N. C. Mr. Lipe had been with the Linn-Corriher mill group since its organization fifty years ago.

After a long illness, **John Harrell Schoolfield, Jr.,** former executive in the production field of Dan River Mills, Inc., died at the age of 69.

At the age of 93, **Stephen O. Metcalf,** former textile executive, died at his home in Providence, R. I., on September 27. Mr. Metcalf was formerly associated with the Wanskuck Co., Providence, which was founded by his father.

On October 24 **Julius S. Holl,** advertising manager of Link-Belt Co., Chicago, Ill., died after a prolonged illness.



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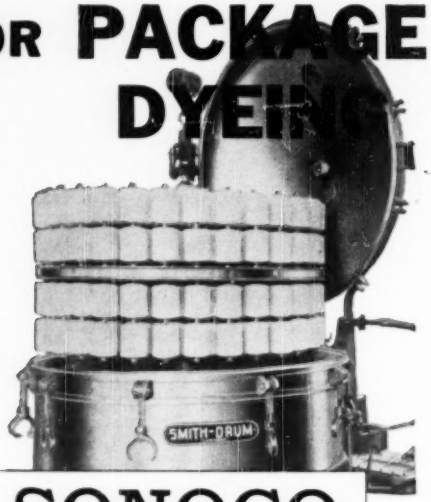

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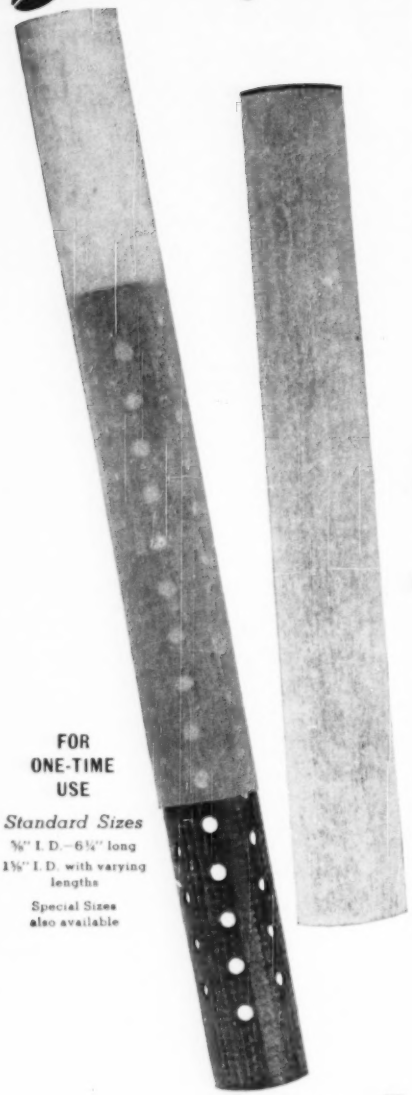

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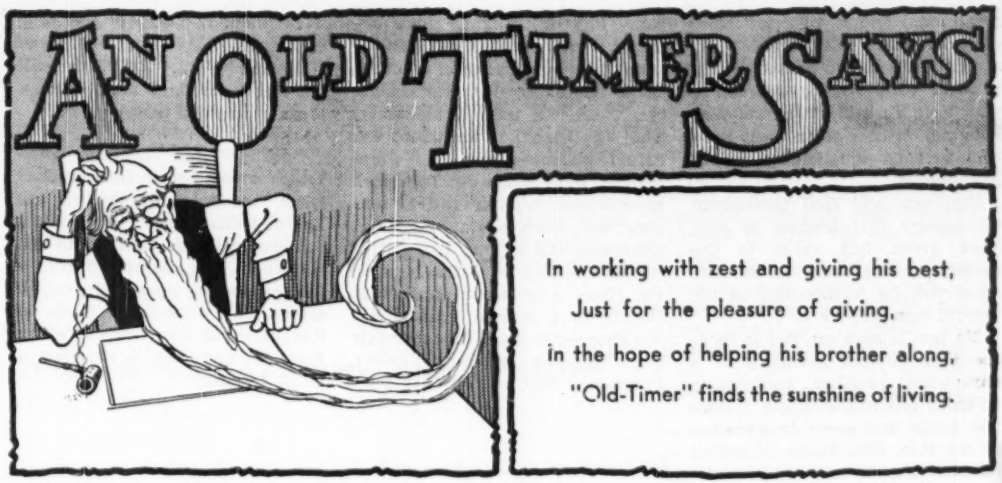
AN OLD TIMER SAYS
In working with zest and giving his best,
Just for the pleasure of giving,
in the hope of helping his brother along,
"Old-Timer" finds the sunshine of living.

Progress Is the Result of Imagination

(Concluding the discussion, "Can You Dream?" which began in the February issue.)

LET US repeat that all progress is the result of Imagination. It (Imagination) is the forerunner of new ideas, and new ideas are what will put you out of that majority class into the "AA" class of men who are going places.

Imagination looks at a problem and finds a better way to do it. Imagination finds a way to kindle the spark of loyalty in operatives —creative Imagination took the unskilled labor away from the machine operative such as the weaver, the section man, the spinner, and fly frame hand. Have we done it all? Look around, fellows. Look around. There is always a better way. If you don't believe it, brother, just lie down and sleep about ten years and then come back and see what textile mills will be doing then.

Ever See a Mongoose?

Well, the mongoose is a little animal noted for killing snakes, and here is a little joke which you may deem "corny" but it brings out a point about Imagination.

An inebriated gentleman was weaving down the street carrying in his hand a box with perforations in the lid and sides. An acquaintance stopped him and said, "My, what have you got in the box?"

"Shh," said the drunk. "It's a mongoose."

"What on earth for?" asked the friend.

"Well," he said, "I am not very drunk now, but I'll be soon and when I am I see snakes, and I am scared of them, and that's what I got the mongoose for; to protect me."

"But, good heavens," said his friend, "those are imaginary snakes!"

"That's all right," said the drunk. "This is an imaginary mongoose. There's not a darn thing in the box!"

Yea, fellows, Imagination may and does work many ways. That is why you should be continually on the alert to find new outlets for your Imagination. The number of instances are legion where the Imagination of operatives carried them into doing things they regretted later, simply because the Imagination of management was asleep on the job.

A full page advertisement in many daily papers had a headline across the page saying "We Drew Its Blueprints From Your Dreams." It went on to describe the auto with many new features they were bringing out.

Another large firm explained how it developed a new product. "Out of this need, coupled with *Imagination*, scientists have produced a new and fantastic method."

Don't you see, gentlemen, the large automobile firms, the large oil firms, architects, scientists, educators, engineers, bankers, surgeons, and all outstanding leaders are making practical use of "Creative Imagination." Don't you think it is about time operating textile executives are falling in line? Well if you don't, you may be falling *out* of line pretty soon.

A quotation of a statement by a

great man, and it was not made yesterday but years and years ago, would seem to add authority to what we are trying to prove to you. Voltaire said: "The amazing imagination of Homer must have been at least equalled by that of Archimedes."

Yes, you will find throughout all history that leaders of men have given full value to the faculty of the brain to imagine what will be forthcoming in the future, then prepare for it.

No textile man can fail to foresee that Human Relations is a paramount problem confronting us today and in the future. It does not strain any one's Imagination to see that. Still many operating executives seem to be "just waiting" to see what happens next.

Discontent is the breeder of the majority of the troubles existing between labor and management. That, most of us will admit. Monotony is a breeder of discontent. Remember the OLD-TIMER article which pointed out the fact that modern methods have taken so much of an operator's unskilled work away from him that a weaver only puts in threads, puts in threads, and then puts in more threads.

His mind does not have to think: when does the loom need oiling—when must I clean off—when is it time to fan off (probably some young overseers do not even know what "fan-off" means to a weaver)—when is it time to take off the roll of cloth on that loom? No, he only has to put in threads and put in threads. He does not even have to *think* how to put in a thread—he does it unconsciously—and brother, that grows darn monotonous.

OLD-TIMER gave you quite a few articles showing ways you could occupy your operatives' minds—tie him to the firm he is working for—don't try to give operatives something for nothing—that has been tried in many ways—it just doesn't work—but touch his pocketbook and you have done something to make him a *part of the firm.*

Go back and read the OLD-TIMER article, "Mr. Mill President, What Can You Lose," and other OLD-TIMER articles along this same line of thought. Those articles were not fiction, gentlemen, they were based on practical facts. The editor of this magazine can vouch for their authenticity. That is, the editor knows of the actual instances many of those articles were based on. The ideas have worked with operatives, and they will work again today and tomorrow and as long as we have people working for a firm because the ideas were based on Human Nature—and human nature has not changed in basic fundamentals since Bunyon wrote "Pilgrim's Progress." Boy, would that man have made a textile operating executive? Why don't you read "Pilgrim's Progress"? You will get some excellent and practical ideas to use in a textile plant.

Getting tired hearing OLD-TIMER rave about Imagination? Okeh, then, we will switch the line of thought just for diversion, but we make no promise to not come back to it. Because that subject can never grow old—it will always be an important factor in the success of every man in every vocation, and that is covering a lot of territory.

Legislation in Associations?

(*Continued from page* 83)

ain't done nothing for me lately."

Labor unions thrive on strife and discord and dissatisfaction, and their chief stock in trade is keeping their members unhappy about what they have and antagonistic toward their employers and toward the public in general. Consequently, as one means of keeping this dissatisfaction alive and of expressing their destructive philosophy and their contempt for our American political and economic systems and institutions, they must always be proposing class legislation, either for the direct benefit of the labor union members, or for the embarrassment and the detriment of employers and businesses who provide the jobs by which their members make a living.

I do not profess to understand this point of view, but after contending with the legislative proposals and activities of labor unions for a number of years, I simply know that this is what happens. Most of the time they never expect to get the legislation enacted, and always they hope to obtain nothing better than a compromise and a lot of publicity which they can pass on to their members in a feeble effort to justify the dues that they are taking out of their pay checks.

In all my years of experience I have seen very little legislation proposed by labor unions that had any real public value, or that actually, when fully analyzed, would really be for the benefit of the people whom they are claiming to help. It is always destructive, unreasonable, and prejudiced in character, and it is perfectly natural that employers in self defense and in defense of their own employees should strive to defeat it.

Now my second point is that employers and trade associations do not propose very much legislation, because they do not believe that our morals or our business practices or any other phase of human activities can be materially improved, simply by passing a law. Our system of free, competitive enterprise is based upon individual initiative and individual freedom, and that goes for the business man as well as for the employee.

We produced the materials and equipment that won the last great war in spite of our legislative spider web and in spite of the obstacles and difficulties that were thrown in our way by bureaucratic interference, stupidity, and, in some cases, subversion and sabotage.

Industry and business believe, like the great Thomas Jefferson: "That that government is best which governs least," and, conse-

quently, they do not advocate the enactment of laws to meet every contingency and every new problem that arises from day to day. They believe that we already have too much legislation and regulation and restriction, and they certainly don't want to be a party to proposing any more.

I could point out rare instances in which businesses and industry have sponsored and have helped to pass very constructive legislation, both state and national, but that is not necessary to prove the point that I am trying to make.

I am afraid that whoever wrote that letter published in your October issue did not know very much about the business man's point of view, and had never had any experience in dealing with political and legislative problems.

CONTRIBUTOR No. 8344

Nylon Dyeing—Theory and Practice

(*Continued from page* 143)

mits only pale to medium depth shades. They emphasize differences in orientation and crystallinity as well as amine end content. Wool, being less oriented, yields full shades. On nylon, it is unnecessary to employ the high quantity of sulphuric acid normal to dyeing wool with these colors.

Direct Dyestuffs. Direct dyestuffs resembling acid dyestuffs in chemical structure will dye nylon. Maximum color value is realized in an acid bath, inimical to the salt linkage mechanism. The more complex direct dyestuffs are unable to penetrate and will do no more than tint. An addition of soda ash or like alkaline agent made to the dyebath of a nylon/cellulosic union with dispersed acetate rayon dyestuffs will effect reservation of the nylon.

Basic Dyestuffs. Basic dyestuffs possess affinity for nylon under alkaline conditions. Higher tinctorial value is possible than with acid dyes as there are twice as many corboxylic acid groupings as amine end groups, and the basic dyestuffs are stronger tinctorially. This class possesses low resistance to light and use is restricted.

Azoic Dyestuffs. Azoic combinations can't be applied to nylon by the normal techniques employed for cellulosic fibers since with a diazonium chloride, only the chloride anion will be absorbed by nylon and the cation is incapable of penetrating. Aromatic bases, like napthol bodies, are absorbed from alkaline solution. Treatment in an acid nitrate bath effects diazotisation and coupling.

Vat Dyestuffs. These are applied from alkaline solution at high temperature due to the slow diffusion rate of alkaline leuco anions. The mechanism is hydrogen bonding, the strength of which is governed by complexity of the vat dyestuff. Steaming treatment tends to break

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The WICACO SPINDLE OILING MACHINE GUARANTEES PROPER LUBRICATION!

IT flushes out the old oil and replaces it with fresh oil in one simple operation. It saves time, labor and power, and guarantees proper oil level at all times.

This machine is used successfully in many mills producing wool, cotton, silk and rayon.

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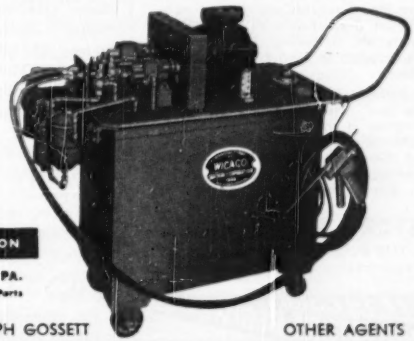

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for textiles in loose or compressible forms—3" penetration.

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for textiles in cones, rolls, beams and similar forms.

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Try one of these moisture testing instruments for 10 days—use it, test it and prove its superiority. Send samples, moisture range and Purchase Order to cover trial period. No obligation!

Quick, Accurate Readings

In less than 3 seconds you can test moisture content of practically all types of textile materials, including cotton, wool, rayon and nylon in fabrics, packages and loose forms.

This portable instrument is designed for "on the spot" checks in your plant. Moisture Register is easy to operate—requires no technical knowledge or complicated figuring. Cost is negligible in comparison to advantages. Write today for complete details. Specify type of material to be tested.

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Dept. H, 1510 W. Chestnut St., Alhambra, Calif.

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The standard in moisture testing

the hydrogen bond and confers increased light resistance. Migration to the surface is brought about, thereby deteriorating wet and rubbing fastness properties.

Dyeing Wool/Nylon Blends. With level dyeing acid dyestuffs, there is no practical way to alter partition of the dyestuff on wool/nylon unions. Solidity of shade is unobtainable beyond the saturation depth given by the amine end content of nylon, thus prohibiting heavy shades. Pale to medium shades can be realized with premetallized dyestuffs. Chrome dyestuffs are best for heavy shades using the afterchrome method and a reducing treatment after chroming.

A New Type of Non-Woven Fabric

By J. F. RYAN
The Kendall Co.

WEBRIL-R is a new type of non-woven fabric in which fibers are twisted and interlocked, rather than bonded. Superficially, it resembles felt, although it is an all-cotton bat.

Made from bleached absorbent cotton fibers, it has higher capillary action than other non-woven fabrics. The fiber locking character makes it lint free. Weight ranges from about 70 grams up to about 250 grams per square yard. Its dry strength is of the order of 7 grams per inch grab weight as measured on the Instron. Wet strength is usually about 50% of the dry.

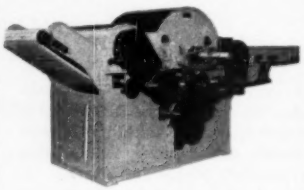
Since entangled fibers have a degree of elasticity and resilience, there is a tendency to recover original fiber position. This characteristic makes it conformable to various contours, stretching like an elastic bandage. There is greater strength and more resistance to deformation in the horizontal plane than in cross section.

Its extensibility makes it particularly adaptable for the manufacture of artificial shoe leather, having a base more resemblant to real leather than woven fabric or paper. The product is also finding use as a surgical gauze and as an orthopedic bandage.

By releasing tension on the wet material during dyeing, this product can be wet processed successfully, despite its conformable properties.

Don't Use Two When 1 Will Do

K & D Single Cylinder Waste Machine Will Do the Same or Better Job on Just One Cylinder as Similar Machines Using Two Cylinders



NOTE ADVANTAGES:

1. Provides double action with better results on a single cylinder.
2. Made with 60% fewer gears, sprockets, chains, etc., with tremendous savings in parts replacement and maintenance.
3. Eliminates fans and dust rooms.
4. Reduces fire hazard.
5. Uses only half as much of mill's floor space.
6. Reduces damage to waste fibers from nipping and chewing.
7. Provides safety guards for sprockets, gears, and chains.
8. Saves power by using 7½ HP motor.
9. Simpler construction assures fewer stops, less down time.
10. Renders larger percentage usable fiber from mill waste.

Write for NEW Catalog

KIRKMAN & DIXON
Machine Shop & Foundry
Greenwood, S. Carolina

WHAT THE TEXTILE MILLS ARE DOING

A-Q Mills, Inc., Timmonsville, S. C., manufacturers of rayon and nylon jersey fabrics, have plans under way for construction of a 20,000 sq ft addition to their plant, to house additional tricot knitting equipment. This is the third expansion since the mill was organized in 1938 by J. Ed Anderson and A. T. Quantz.

Employees of the Roanoke Weaving Plant, **Burlington Mills Corp.,** Vinton, Va., have received a second Liberty Mutual Insurance Company Accident Prevention flag, for completion of two million man hours without a lost time accident. The first flag was presented in 1949 when completion of the one million man hours mark was reached.

Seven new knitting machines of various types, valued at over $26,000, have been purchased by **The Carolina Corp.,** Clover, S. C.

Pile fabrics will be woven in the recently reopened plant of **Collins & Aikman Corp.,** Bristol, R. I. Operations will begin on a limited basis, to be expanded as business warrants, according to the president, A. R. Jube.

The Deering, Milliken Co. has announced plans for construction of a $2,000,000 woolen mill at Columbus, N. C., to be equipped at an additional cost of $10,000,000. The new plant will be known as the Hatch Mill in honor of Harold Hatch, a vice-president and director of the company. Also under way is a million dollar expansion program at the firm's finishing plant near Pendleton, S. C., which is expected to double the plant's present worsting capacity.

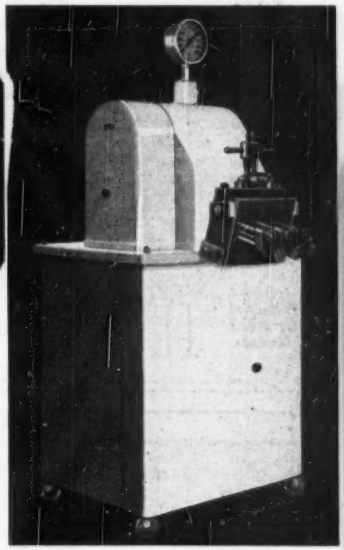
The **Adelaide Mills,** Anniston, Ala., are celebrating their golden anniversary this year. Founded in April, 1900, with 2500 spindles, the plant now has 12,000 spindles and employs approximately 300 people. Yarns for use in upholstering fabrics, lace, etc., are manufactured.

Fairview Mills, subsidiary of Julius Kayser & Co., have leased two mills from Textron Southern, according to a recent announcement—one at Westminster, S. C., is a 25,000 sq ft building; the other building is located at Pickens, S. C. Also, the firm has under construction a large tricot knit plant at Fountain, Inn, S. C.

Spun synthetic fabrics will be produced by the recently organized **Farmac Mills, Inc.,** with offices at Gastonia, N. C. The new company was formed by the LaFar interests of Gastonia and Burke M. McConnell of Greensboro, N. C. The plant, near Rock Hill, S. C., has about 10,000 spindles and is equipped to spin acetate and viscose rayon and other synthetic fibers, according to the officials of the organization.

Tennessee Valley Fabric Co. has a lace manufacturing plant under construction at Sweetwater, Tenn., ac-

LOGEMAN TEXTILE HOMOGENIZER



ENGINEERED AND DESIGNED SPECIFICALLY FOR
TEXTILE SIZING

HOMOGENIZED SIZE EFFICIENCY AT A NEW LOW PRICE

This new 1950 Logeman Textile Size Homogenizer is designed exclusively for textile manufacturers, to meet every specific requirement necessary in the preparation of superior warp size mixes.

Investigate this Logeman Textile Homogenizer now and let us prove to you its value and efficiency.

Write for complete details and prices

Southern Distributor
SOUTHERN SIZING COMPANY
ATLANTA 1, GEORGIA

ADVANTAGES OF THE LOGEMAN TEXTILE HOMOGENIZER

- PRODUCES UNIFORM SIZING AND CONTROLS SIZE VISCOSITY.
- REDUCES SHEDDING AND INCREASES WEAVING EFFICIENCIES.
- ELIMINATES SIZE COOKING AND REDUCES STEAM COSTS.
- SAVES TIME AND CUTS OPERATING COSTS.
- HEAVY DUTY — RUGGED DESIGN — SIMPLE ASSEMBLY WITH FEWER PARTS — CAPABLE OF CONTINUOUS HIGH PRESSURE OPERATION.
- PRESSURE HEAD CAN BE DISASSEMBLED FOR CLEANING AND REASSEMBLED IN 10 MINUTES.
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C. W. LOGEMAN CO. 633 BERGEN STREET, BROOKLYN 17, N. Y.

HOW ANDERSON SHIELDS INCREASE SPINNING ROOM EFFICIENCY

Spinning rooms using Anderson Shields save time and money, and prevent disruption when unnecessary breaking, chipping, and splitting of bobbins and spools is avoided. In a year's time these items alone can amount to a surprising sum . . . Insist on Anderson and get the best protection metal shields afford . . . Watch your spinning room efficiency increase!

TEXTILE SHIELD CO., INC.

Metal Protection for Wood Turnings

J. N. ANDERSON, *Treas.*
LAWRENCE, MASS., U.S.A.

the lighter, longer wearing—

DANDUX

DOFF BASKETS

HAMPERS & DOFF TRUCKS

C. R. DANIELS, INC., 121 E. Third St., Charlotte 2, N. C.

cording to an announcement by A. W. White, superintendent. Only cotton lace will be made in the beginning, with nylon lace to be manufactured later on some of the machines.

The Tilton, N. H., plant of **M. T. Stevens & Sons Co.**, plans installation of 144 new looms, according to Richard L. Clarenbach, superintendent.

Haywood-Schuster Woolen Mills, Inc., East Douglas, Mass., are planning construction of a one-story addition to the mill warehouse, to cost over $160,000.

The former mill of Textile Printing Co., Bondsville, Mass., has been acquired by **Bondsville Print Works, Inc.**, and will be operated for dyeing, bleaching, screen printing, and finishing of rayons, silks, etc.

American Thread Co. has announced the transfer of equipment from its East Hampton, Mass., mill to the plant at Fall River, Mass., for increased finishing operations.

Chicopee Manufacturing Corp., surgical gauze, etc., has established a rayon division to occupy part of the mill at Manchester, N. H.

Collingswood (N. J.) Hosiery Mills, Inc., have purchased the mill and equipment of Haddon Hosiery Mills Corp. and will use for manufacture of women's full-fashioned hosiery.

A one-story addition to the mill, and additional equipment, are planned by **Berkeley Mills, Inc.**, Balfour, N. C., cotton gauze.

Amos Johnstone is principal incorporator of the recently chartered **Johnstone Textiles, Inc.**, Gastonia, N. C.

C. G. S. Fabrics Corp., Goldston, N. C., was recently organized for the manufacture of rayon and cotton fabrics. The company is headed by C. L. Chatham, H. E. Goldforth, and G. M. Spencer, all of Burlington, N. C.

Two one-story extensions to the Edna Mill at Reidsville, N. C., are under construction by **Cone Mills Corp.** They will be used for warehouse service.

Sanford (N. C.) Hosiery Mills, Inc., full-fashioned nylon hosiery, are planning construction of a one-story addition to the plant.

Two one-story extensions to the 43,000 sq ft floor space, is under construction at **Valdese (N. C.) Manufacturing Co., Inc.**

The mill of James Thomas & Co., Atlanta, Ga., has been taken over by the recently organized **Adair Manufacturing Co.**, knitted shirts, underwear, etc. The new firm is headed by Abe Adair, president, and I. R. Adair, vice-president. James A. Thomas will be in charge of production.

The recently organized **Consolidated Thread & Yarn Corp.**, Lansdale, Pa., will operate a mill for processing nylon, rayon, and silk yarns for knitting and weaving service. George H. Seelig is head of the new firm.

An addition to the plant, to cost approximately $100,000, will be erected by **Blue Bird Silk Manufacturing Co.**, York, Pa.

Chiquola Manufacturing Co., Inc., Honeapath, S. C., broadcloths, etc., is planning construction of a one-story addition, with installation of about 100 new looms and accessory equipment.

According to reports, new spinning machinery and accessory equipment have been ordered by **Woodside Mills**, for installation in the mills at Simpsonville and Fountain Inn, S. C. The cost is said to be approximately $1,000,000.

A three-story addition, to have approximately 15,000 sq ft floor space, will be constructed by **Startex Mills, Inc.**, Tucapau, S. C. The additional space will be used for carding department, and new equipment will be installed.

Texas Textile Mills, Inc., McKinney, Tex., are said to be planning extensions and improvements to the mill, to cost approximately $100,000. Also, the mill village will be enlarged.

Vanity Fair Mills, Inc., Reading, Pa., are planning to occupy, under long-term lease, a one-story building to be constructed in Atmore, Ala. The branch mill will be equipped for manufacture of lingerie, and is expected to be in operation early in the new year. In Jackson, Ala., **Clarke Mills**, a subsidiary of Vanity Fair, are planning an addition to the mill, with installation of additional equipment.

Contract has been let by **Gainesville (Fla.) Industrial Corp.** for a one-story building, to be occupied under lease, for manufacture of full-fashioned nylon hosiery.

Echota Cotton Mills, Inc., Calhoun, Ga., has a one-story addition under construction, to be used for expansion in the weaving department.

Mandeville Mills, Inc., Carrollton, Ga., are replacing the old equipment in No. 2 card room, to provide for increased output.

A one-story addition, to be used as a dyeing and finishing mill, is under construction at **Auburn (Ky.) Hosiery Mills, Inc.**, full-fashioned and seamless hosiery.

Lancaster Looms, Inc., Charlotte, N. C., knit fabrics, are now operating in a branch mill at Boiling Springs, N. C., formerly used by Weavers Spinning, Inc. With the new equipment installed, cotton yarn manufacture in the amount of about 25,000 lb per week, is expected.

Elastic webbings and kindred products will be manufactured by the recently organized firm of **Charbert, Inc.**, Westerly, R. I. John Gerguson, Watch Hill, R. I., is principal incorporator.

Charles Gerard, Jewett City, Conn., is principal incorporator of the newly chartered **Phenix Finishing Co., Inc.**, West Warwick, R. I. The firm will operate a dyeing and finishing mill.

Bernson Silk Mills, Inc., Buena Vista, Va., have plans under way for an addition to the mill, with installation of equipment for increased capacity.

The former mill of Bennington (Vt.) Manufacturing Co., will be used as a branch mill of **Monument Manufacturing Co.**, Assonet, Mass.

Textron Co. of Puerto Rico, San Juan, P. R., has announced plans for a new one-story rayon weaving mill at Humacao, to cost approximately $1,200,000. The new mill will have 46,000 sq ft floor space.

Land has been purchased at Union, S. C., for construction of a textile finishing plant by **Clearwater Finishing Co.**, a subsidiary of United Merchants & Manufacturers, Inc. Cost of the first unit is reported to be $15,000,000.

An improvement program, including an expenditure of $400,000 for new machinery and equipment, has been announced by **Quitman (Ga.) Mills, Inc.** The improvements will enable the mill to process locally-grown cotton, which hasn't been possible heretofore.

Abney Mills of South Carolina have announced the purchase of a substan-

it takes GOOD BEAMS to make good warps!

PROBLEM: ORDINARY BEAMS WON'T HANDLE THE PRESSURES OF NYLON AND RUBBER YARNS!

solution . . .

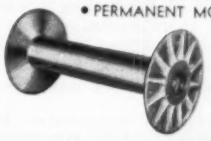
MILTON NYLON & RUBBER TRICOT BEAM

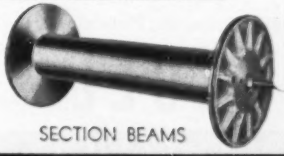
• FORGED HEADS
• RIGID BARRELS

Tested and proven under actual operating conditions, here is Milton's forged head beam designed especially to withstand extreme pressures encountered when warping tremendous yardages of monofilament; fine denier, low turn nylon; and rubber yarns! Heat-treated, aluminum alloy heads and barrels permanently joined with continuous heliarc welds. Write for complete information!

MILTON LIGHT METAL BEAMS are the result of years of close collaboration with mill production men . . .

• PERMANENT MOLD HEAD TRICOT BEAMS





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DESIGNERS — ENGINEERS — MANUFACTURERS
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24 TRUCKS for the Textile Industry

Excel Pin Board Truck No. 1500

Constructed of angle and heavy flat sheets, electrically welded throughout. Handy pipe handles make this truck easy to push. Finished in deck gray enamel.
This truck will carry your pin boards efficiently and safely.

Also:

No. 100 Loose Doff Box
No. 200 Doff Box Frames
No. 300 Doff Truck
No. 400 Slatted Yarn Truck
No. 500 Metal Yarn Truck
No. 600 Slatted Conditioning Truck
No. 700 Waste Can Truck
No. 800 Platform Truck
No. 900 Metal Conditioning Truck
No. 1000 Fibre Truck
No. 1100 Steel Lap Truck
No. 1200 Utility Fibre Truck
No. 1300 Utility Metal Truck
No. 1400 Comber Lap Truck
No. 1600 Bale Opening Truck
No. 1700 Cone Truck
No. 1800 Beam Truck
No. 1900 Sliver Can Truck
No. 2000 Swing Bed Doff Truck
No. 2100 Battery Filling Truck
No. 2200 Rack Truck
No. 2300 Fibre Truck
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EXCEL
Textile Supply Co.

"Excel Trucks Excel"

LINCOLNTON, NORTH CAROLINA

tial interest in the Hunt Machine Works, Inc., Greenville, S. C. John I. Smith, manager of the Renfrew Bleachery, has been made president of the Hunt firm and a member of the board of directors, while retaining his position at the bleachery. Alfred N. Willett remains as vice-president and works manager, and William E. Henderson as secretary-treasurer. John O. Hunt, who resigned as president, will remain a member of the board of directors.

Construction of a multi-million dollar finishing plant at Seneca, S. C., is planned by **Utica & Mohawk Cotton Mills, Inc.**, Utica, N. Y., according to a recent announcement. Approximately 900 acres of property have been acquired.

Columbus (Ga.) Manufacturing Co. plans construction of a two-story addition for expansion of its cloth room.

The former mill of Greenville Spinners, Inc., is being occupied by **Greenville (N. C.) Mills, Inc.**, for manufacture of woolen yarns. S. L. Duffett is president of the new firm.

C. S. Morris, president and general manager of **Salisbury (N. C.) Cotton Mills,** has announced plans for a 20% expansion of the carding department. A one-story addition, now under construction, will add 6,000 sq ft of floor space.

The pilot plant and machinery research division of **J. P. Stevens & Co., Inc.**, have been merged into a single operation, to be known as Stevens Manufacturing Research, according to R. G. Emery, executive vice-president. A. E. Winslow, former director of machinery research, will be director of the new division.

Teague Hosiery Mills, Inc., Hickory, N. C., were recently incorporated by R. M. Teague, J. V. Teague, and P. Eugene Rhyne.

The old Morristown Knitting Mills in Dandridge, Tenn., have been purchased by Walter Gaby and will be known as **Gaby Hosiery Mills.** Anklets will be manufactured. Superintendent of the plant is Tom Webb.

Sanford (N. C.) Hosiery Mill is engaged in an expansion program, consisting of an addition 25 x 50 feet in size, and installation of four new full-fashioned hosiery machines.

The recently incorporated **Acorn Knit Co.,** Philadelphia, Pa., will manufacture and deal in fabrics, yarns, threads, and machinery, and will engage in commission knitting, according to a recent report.

E. I. duPont de Nemours & Co. has announced plans for construction of a new nylon yarn plant near Kinston, N. C. It is expected that work on the plant will start early in 1952.

The Firestone Tire and Rubber Co., Akron, O., celebrated its fiftieth anniversary on August 3 with a dedication of the Harvey S. Firestone Memorial. Executives from foreign countries and representatives from all states participated in the events.

Fourteen new rib knitting machines and three flat knit machines have been installed at **Griffin (Ga.) Knitting Mills.** Also, individual sewing tables have been placed in the sewing room, for additional capacity.

Kitty Hawk Hosiery Mill, Inc., Greensboro, N. C., has formed a unit in Asheboro, N. C., for manufacture of men's half-hose. The new unit will be supervised by Glenn W. Winningham, formerly with McLaurin Hosiery Mill.

Robert Q. Hollingsworth of Comer Co., textile machinery firm in Atlanta, Ga., is one of the partners in a newly organized yarn mill at Douglasville, Ga. The firm, known as **Laura Mills,** will manufacture coarse yarn up to 8s to be sold direct.

Alexander Smith & Sons Carpet Co., Yonkers, N. Y., has announced that its research and development department has been divided into seven major divisions: technical laboratories division, market development, product development, chemical research, physical research, mechanical research, and pilot plant.

Bachmann Uxbridge Worsted Corp. is expanding operations at its Talladega, Ala., worsted spinning mill. According to reports, production has been stepped up about one-third.

The recently organized **Newman Yarn Mills, Inc.,** Methuen, Mass., are now in full production, spinning worsted weaving and knitting yarns. Ira E. Newman, president, was formerly with Collins & Aikman.

Park & Barstow, Inc., woolen manufacturers, have changed their corporate name to **Dexter Mills, Inc.**

United Merchants and Manufacturers, Inc., have moved their executive offices to 1407 Broadway, New York, N. Y.

New equipment is being installed at the Winnsboro, S. C., mills of **U. S. Rubber Co.,** to double production of Ustex high-strength cotton yarn, now

in increased demand for Air Force parachute harness webbing.

Expansion of its carpet yarn department, through the construction of a two-story addition to the plant, has been announced by the **Riverside Mills,** Augusta, Ga. The firm has specially-designed machinery to handle its new process in carpet manufacturing.

A 58-foot extension to the plant of **Alice Manufacturing Co.,** Easley, S. C., is under construction. The additional space will allow for rearranging machinery to better advantage.

The former Eufaula Mill No. 3 of **Avondale Mills** has been converted from the manufacture of cotton yarn to rayon yarn and rayon grey goods. Ninety new looms have been installed in the recently air-conditioned plant, along with supplementary equipment, and sixty more looms will be added later.

Contract has been awarded by **Dan River Mills,** for a five-story building adjoining the No. 5 mill at Danville, Va. The new building will be devoted to an expansion of cotton finishing and for storage of finished goods, according to reports.

The Liberty Mutual Insurance Co.'s accident prevention flag was recently awarded to the employees of Puritan Weaving Plant, **Burlington Mills Corp.,** Fayetteville, N. C. The plant had compiled a record of one million man hours without a lost time accident.

Houses now owned by **Apalache** and **Victor Mills** in Greer, S. C., are being offered for sale, with employees being given the first opportunity to purchase them.

The recently incorporated **Barbara Ann Yarn Mills, Inc.,** Atlanta, Ga., will manufacture yarn and related products.

Magnolia (Miss.) Textiles, Inc., have plans for a one-story addition to the mill, which will cost about $65,000, exclusive of equipment, according to reports.

The local plant of Cocheco Woolen Mfg. Co. has been taken over by **Rochester (N. H.) Mill, Inc.,** recently chartered. The new rayon weaving mill is expected to be in operation by January.

The modernization program at **Wedgewood Mills,** Jewett City, Conn., in progress for nearly a year, is practically completed. The modernization calls for 300 looms.

Industrial Preparedness Urged at QM Association Meet

"American Industry must take the initiative and mobilize itself," said Brig. Gen. Richard B. Thornton, special assistant to the Quartermaster General, in his recent address before the Atlanta, Ga., chapter of the Quartermaster Association.

It will take time to survey the nation's industrial plants, and we cannot afford to gamble that we will have time for the Armed Forces to make the necessary surveys, he said.

Following are methods by which business leaders can do their planning concurrently with that of the Armed Forces, to insure industrial preparedness, according to Gen. Thornton:

1. Designate executives responsible for mobilization plans.
2. Re-examine World War II production difficulties, study current military procurement as it applies to possible contracts, and refer problems thus observed to the Technical Services of the Army, Bureaus of the Navy, or Air Force—depending on which service will procure the items.
3. Determine the war production potential of individual plants.
4. Make known to the Technical Services or Bureaus new processes or new designs believed to have war potential.
5. Make known your interest to all Technical Service and Bureaus that may require your products.
6. Start planning now.

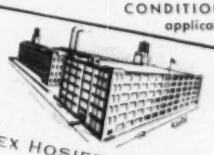
Full Fashioned HOSIERY

NOW CONDITIONED with the "H-W" CONDITIONER

Over 75 "H-W" CONDITIONERS for hosiery applications have been purchased by hosiery mills during the past fifteen months.

Write for Bulletin H1.

Series 18 of typical "H-W" CONDITIONER applications



APEX HOSIERY COMPANY
MAIN OFFICE AND MILL
FIFTH AND LUDLOW STREETS
PHILADELPHIA 40, PA.

Sept. 27, 1950

The Industrial Dryer Corp.,
Stamford, Conn.

Gentlemen:

The Installations of "H-W" Conditioners in our Philadelphia, Pa. and Spring City, Pa. mills have proved very satisfactory. In fact, any hosiery mill producing monofil nylon must have your equipment to manufacture such stockings satisfactorily.

The important advantages attained by use of the "H-W" CONDITIONERS in our mills are: high increase of perfects, reduction of snagging and mending; quicker operation of seaming and looping...all resulting in savings which returned our initial investment in a short time.

Very truly yours,
APEX HOSIERY COMPANY

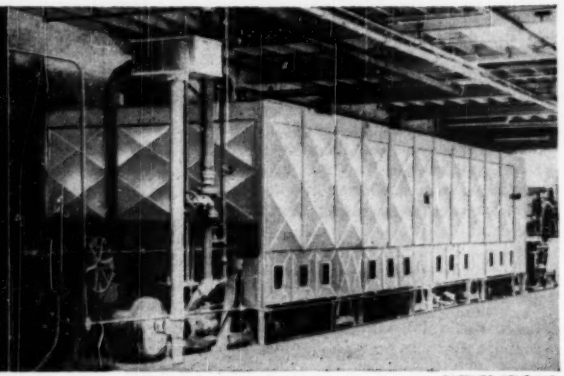
E. E. Struve
EXECUTIVE VICE PRESIDENT AND GENERAL MANAGER

FES:sv

The Industrial Dryer Corporation
STAMFORD, CONN.

Another "first"!

CARBOMATIC "UNA-RAY" OVEN



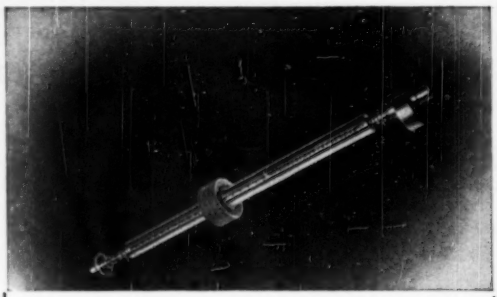
PATENTS PENDING

COMBINES the advantages of 3 types of oven-heating:
(1) INFRA-RED RADIATION (2) CONVECTED HEAT (3) HEATED AIR—with added turbulence

Greatly increased efficiency! For example: *40* linear feet of "Una-Ray" Oven equal the productive capacity of *70* feet of a conventional oven-type. Saves thousands of dollars in equipment cost and operational economies. No burning, scorching, spotting or marking of goods. No crocking. No "gas fading" or color migration. Uniform color is insured. A general-purpose oven (of any capacity needed) that provides accurately-controlled working temperatures up to 550°F. For drying; drying and curing in one operation; resin fusing; Nylon setting, etc. *Write for Bulletin C-12.*

CARBOMATIC CORPORATION • Pioneers in Textile Infra-Red
24-81 47th Street Long Island City 3, N. Y.

Southern Branch: Textile Specialty Co., Greensboro, N. C. *New England Representative:* H. E. Linderson, 35 Westminster St., Providence, R. I.



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Grinders for Calender Rolls . . .
Special Traverse Mechanisms.

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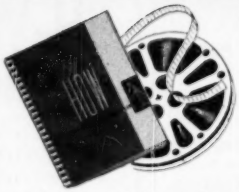

PRESENTS

over 40 ways to improve quality and cut deep into manufacturing costs

Before you modernize, get all the facts you need... the latest information on many new methods and processes. Arrange NOW to see "Textiles Unlimited", General Electric's new 30-minute, full-color, sound movie on textile mill modernization. You will also receive a 100-page reference manual, "How Textile Mills Are Modernizing." It's packed with cost-cutting, quality-improving ideas you'll want! Contact your nearest General Electric office today. *Apparatus Dept., General Electric Company, Schenectady 5, N. Y.*

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HELPFUL BOOKLETS FREE

Here is the "cream of the crop" of literature on textile subjects as prepared by TEXTILE INDUSTRIES advertisers to aid in mill operation and management. These reference books and catalogs are free for the asking and there is no obligation involved. Read through the list carefully for booklet on the subject or New Equipment in which you are interested. Then fill in the numbers of those desired on the coupon on page 196 and mail it to TEXTILE INDUSTRIES. ("First Listings" shown below are not confined solely to TEXTILE INDUSTRIES advertisers).

This service is restricted to those engaged in operation and management of textile industries

First Listing of New Publications

12-1. Quality Control. New booklet describing cotton quality control through cotton fiber testing. The many tests are fully described with advantages of this service explained. United States Testing Co., Inc., 1415 Park Ave., Hoboken, N. J.

12-2. Material Flow Equipment. 24-page two-color catalog available which indexed for convenience and contains application tips, construction features, and specification charts. Gravity conveyors, powered conveyors and hand and platform trucks are treated in separate sections and form a useful reference in solving material handling problems. The Rapids-Standard Co., Inc., Grand Rapids 2, Mich.

12-3. Pressure and Temperature Regulators. Pilot-operated pressure and temperature regulators are discussed in a new 32-page booklet. Illustrated with photos, charts and tables the booklet discusses main valves, controls and strainers, gives capacity and flow data as well as dimensions and weights. Case examples cited to aid users select correct size and type regulator for given application. Spence Engineering Co., Inc., Walden, N. Y.

12-4. Caustic Soda. "Economic Handling of Caustic Soda with Variable Area Meters" deals with the advantages of purchasing high-concentration caustic soda and diluting immediately during unloading, this saving freight costs by shipment of less water. Special meter design, piping arrangements, dilution calculations and pump layout also discussed in detail. Fischer & Porter Co., Hatboro, Pa.

12-5. Textile Machine Parts. New catalog showing those parts most frequently purchased with corresponding part numbers. Illustrated. E. E. Smith & Son, Gastonia, N. C.

12-6. Trolley Electrical Systems. New catalog No. 25 illustrates and describes prefabricated trolley busway electrical distribution system. Planned in sections to aid in selection of electrical equipment in operations involving cutting, sewing, portable tools, materials handling, cranes and hoists. Feed-rail Corporation, 125 Barclay St., New York 7, N. Y.

12-7. Dustless Cotton Card Stripping. New Bulletin No. 1050 entitled "The Portable Dustless Card Stripper," describes this machine which is designed to be the ideal brush stripper and to serve both alone and in conjunction with other methods—to be portable, adaptable, and economical, according to the bulletin. Full description with illustrations and engineering data. Parks-Cramer Co., Fitchburg, Mass.

12-8. Textile Equipment. New catalog describes all types of materials handling equipment which includes doff trucks, lap trucks, quill cans, cone trucks, etc. Pictures show trucks with description of each. J. C. Paddock Co., South Church St. Ext., Spartanburg, S. C.

12-9. Textile Brushes. Unique type folder illustrating special textile cleaning equipment designed to be hung on the wall to facilitate reference to special brush requirements now available. Brushes used in carding, spinning, and weaving operations are grouped under their respective headings with descriptive material below. The Industrial Division, The Fuller Brush Co., Hartford 2, Conn.

12-10. Elevator Doors. New booklet describing and illustrating the various types of fireproof freight elevator door and electric safety interlocking devices for such doors. Many pictures of types available and uses. Security Fire Door Co., 3044 Lambdin Ave., St. Louis 15, Mo.

12-11. Lubrication Systems. New booklet describing typical applications of Lincoln's standardized mass lubrication systems. Centralized circuit of injectors on the machine which dispense a measured quantity of lubricant to each bearing described, with pictures illustrating. Lincoln Engineering Co., 5701 Natural Bridge Ave., St. Louis 20, Mo.

12-12. Labeling Machine. New brochure describing the Progressive "Special" Labeling Machines for labeling one and two ounce soft-wound balls or skeins of yarn (without cores) of various diameters. The "Standard" for labeling spools of sewing thread, mercerized crochet cotton, knitting cotton also described with pictures and engineering data on both. Progressive Labeling Machine, Inc., 137 West 22nd Street, New York 11, N. Y.

12-13. Textile Handling Devices. New booklet describing fast, safe, low-cost machine methods for handling operations, which has revolutionized the textile industry. A wealth of useful information presented in compact form with pictures illustrating uses and methods employed. Included is a tabulation of operations formerly performed manually which are now being done by machines. Clark Equipment Co., Industrial Truck Div., Battle Creek, Mich.

12-14. Automatic Controls. "Wool Scouring Simplified by Automatic Control" is the title of a new booklet available. For proper wool scouring Brown instruments control such critical variables as temperature in scouring and rinsing bowls, squeeze roll loading, frequency and regularity of sludge removal, rinse water flow, and rate of wool delivery to the scouring train—all described with method of operation, schematic diagrams and photographs included. Minneapolis-Honeywell Regulator Co. Brown Instruments Div., Wayne & Roberts Aves., Philadelphia 44, Pa.

12-15. Stainless Steel. "Making the most of Stainless Steels in the Textile Industry" is the title of a new 32-page booklet which has as it's keynote economy through the use of stainless. Past experience cited to show that stainless equipment increases production, reduces maintenance and cleaning, keeps equipment inventory lower, and effects savings on replacements and repairs. Crucible Steel Company of America, 405 Lexington Ave., New York 17, N. Y.

12-16. Platecoil. Bulletin describing this new method of industrial heating which requires only 50% of the steel needed for conventional methods. "Platecoils" take only half as much space in the tank as they have more than double the B.T.U. capacity per square foot area, according to the bulletin. Ten advantages over pipe coil described. Kold-Hold Manufacturing Co., Lansing 4, Michigan.

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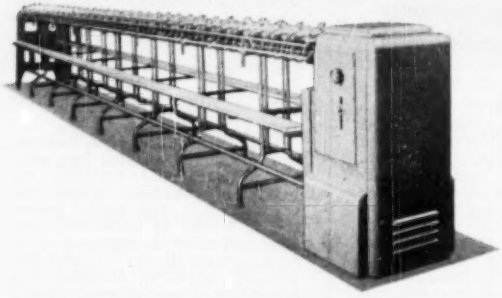

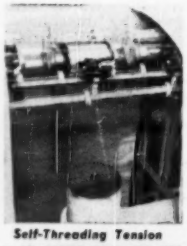

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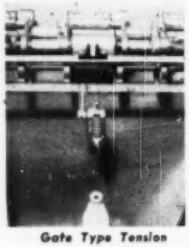

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5. "WASTE REDUCTION AND CONTROL"—19-page illustrated booklet giving primary waste factors; how to calculate cost of departmental waste; actual waste figures from mills; contains survey of waste practices. — SOUTHEASTERN ENGINEERING CO., West Point, Ga.

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12. CONDENSED LISTINGS—8 page pocket sized booklet listing by plant how the machinery and mill supplies available. Designed to help purchaser in grouping his orders to greatest advantage.—ATKINSON, HASERICK & CO., Boston, Mass.

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16. TEXTILE RESEARCH—Booklet describing Research Department's commercial scale facilities for cotton spinning, worsted spinning, etc. Explains organization and function of department.—AMERICAN VISCOSE CORP., SYLVANIA DIV., New York, N. Y.

18. FACTORING—Information available on how factoring works to aid client in keeping capital fluid and to avoid credit losses. Inquiries regarding these services welcome.—L. F. DOMMERICH & CO., 271 Madison Ave., New York 16, N. Y.

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102. "TANK TALK"—Sixteen page booklet of illustrations showing various types of elevated steel tanks constructed and erected by manufacturers as well as stand pipes, reservoirs, storage and high pressure vessels, cylinders, along with helpful technical data. Also a list of what a few of the cotton mills, etc., said.—R. D. COLE MANUFACTURING COMPANY, Newnan, Ga.

103. HUMIDIFICATION, EVAPORATIVE COOLING—Bulletins available displaying AMCO automatic self-cleaning atomizers, controls, and evaporative cooling equipment.—AMERICAN MOISTENING CO., Providence, R. I.

103. MAPLE FLOORING — Booklet describing finishing of Northern Hard Maple Flooring—list of M.F.M.A.-approved heavy-duty floor finishes. — MAPLE FLOORING MANUFACTURERS ASSOCIATION, Chicago 1, Ill.

117. CLEANING SYSTEMS — Booklet entitled "Certified Climate and Cleaning Systems" gives latest information on systems. Products and uses fully discussed with two story layout of Certified Climate central station air conditioning system.—PARKS-CRAMER CO., Fitchburg, Mass., and Charlotte, N. C.

119. MOPPING EQUIPMENT—Complete catalog and circulars containing information on the many sizes and styles that can be had.—S. C. LAWLOR CO., Chicago, Ill.

121. STEAM GENERATORS—Bulletin P-1 describes compact, package type boiler for heating, power, or processing. Described as fully automatic, firing all liquid or gaseous fuels.—THE CYCLOTHERM CORP., Oswego, N. Y.

123. STAINLESS STEEL TANKS — Bulletin CHR-50 illustrates the half round stainless steel horizontal jacketed tank with horizontal agitator and scraper blades, used for size cooking. Bulletin JS-50 shows various stainless steel jacketed tanks, and SS-50 shows single shell tanks.—METAL GLASS PRODUCTS CO., Belding, Mich.

125. FILTERED DAYLIGHT—Booklet on Industrial Daylighting with helpful information on reduction of glare and sunchear in textile mills. Guide for selection of the right glass for windows and skylights.—BLUE RIDGE SALES DIVISION, LIBBEY, OWENS, FORD GLASS CO., Toledo, Ohio.

127. SOLENOID VALVES—Bulletin "V" lists sizes from ⅛ inch to 2 inches; valves for normally open or closed service; stainless steel or Jenkins disc seats; three way solenoid valves, etc.; typical installations.—THE JOHNSON CORP., Three Rivers, Mich.

132. SANDING AND FINISHING—With Coated Abrasives, 88 page illustrated booklet on modern production methods, including information on the use of "Texalox" Cloth take-up roll covering and Fillet Cloth for sharpening cardcloth.—THE CARBORUNDUM CO., Niagara Falls, N. Y.

135. SAFETY COLOR CODE—How six standard colors can be used to reduce hazards, cut down accidents.—E. I. DU PONT DE NEMOURS & CO., INC., Finishes Division, C44, Wilmington, Dela.

140. STEEL PRODUCTS—Complete list of hot and cold rolled carbon and stainless steel products available for immediate shipment—issued regularly. —WAREHOUSE DIVISION, ATLANTIC STEEL CO., P. O. Box 1714, Atlanta, Ga.

142. ALUMINUM SCAFFOLDS — Circulars describing features of rolling scaffolds designed for use in weave rooms, spinning rooms, etc.—UP-RIGHT SCAFFOLDS, Berkeley, Calif.

145. META-CLEAN—How Meta-Clean can cut our loom and equipment cleaning time from 7 hours to one hour, explained in complete set of literature available.—CECIL H. JARRETT CO., INC., Newton, N. C.

182. MODERN METHODS OF TEXTILE FLOOR MAINTENANCE—Illustrated treatise on the history of floor cleaning in textile plants and a detailed description of new methods for reducing floor cleaning costs as well as pre-serving textile mill floors.—G. H. TENNANT COMPANY, Minneapolis 11, Minn.

167. DU PONT COLOR CONDITIONING FOR INDUSTRY—Booklet describing color used to reduce maintenance costs, increase production, curtail fatigue, improve employee morale.—E. I. DU PONT DE NEMOURS & CO., INC., Finishes Div., Wilmington, Delaware.

170. WHY IT PAYS TO ANCHOR YOUR TEXTILE MACHINES WITH UNISORB—Illustrated booklet discussing control of vibration and noise and how UNISORB reduces maintenance costs.—THE FELTERS CO., Boston, Mass.

173. BLOWERS AND EXHAUSTERS—Bulletin No. 3014-D describes types "E" and "RE" electric blowers and exhausters. Uses and full description of each with detail drawings.—BUFFALO FORGE CO., Buffalo 5, N. Y.

174. PAINTING AND STRIPPING—Booklet describing materials and procedure designed to simplify the removal of oil base and synthetic paints, enamels and similar finishes from metal surfaces.—OAKITE PRODUCTS, INC., New York, N. Y.

179. BETTER WAYS—Form 2020, condenser catalog of standard and special model Toledo Industrial Scales that are being used in receiving, shipping, and production operations by all industries including the textile field.—TOLEDO SCALE CO., Toledo, Ohio.

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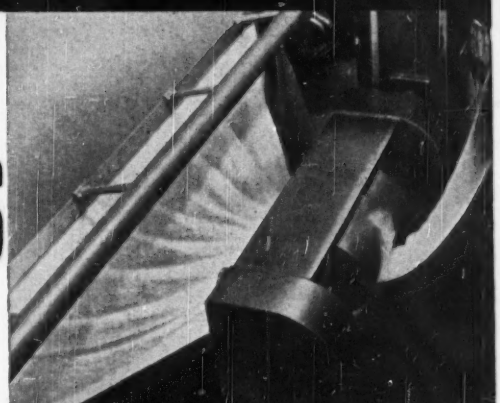

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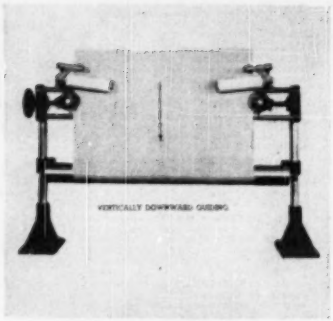

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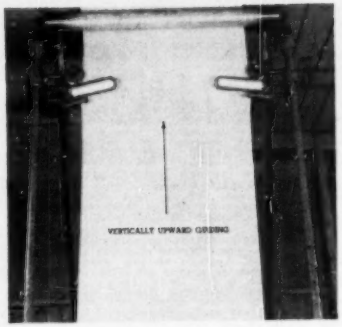

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218. LEATHER BOOKLET NO. 202 — Attractive book illustrating and describing BONDARON Special Tanned Leather as used in various forms such as Cheek Straps, Solid Round Leather Belting, Flat Belting.—CHAS. BOND CO., Philadelphia, Pa.

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223. ELEVATOR SELECTION—How to integrate the selection of freight elevators with the material handling problem answered in 44-page booklet B-4402 on freight elevators.—ELEVATOR DIVISION, WESTINGHOUSE ELECTRIC CORP., Pittsburgh, Pa.

225. AUTOMATIC SPEED CONTROLS—Booklet No. 2349 contains photos and operating diagrams of applications of company's new controls available in four basic types—electronic, hydraulic, pneumatic, and mechanical.—LINK-BELT CO., 307 N. Michigan Ave., Chicago, Ill.

236. LEATHER BELTING CALCULATOR—Handy and attractive calculator for determing belt speeds, horsepower per inch of belt widths, etc. will be sent free on request.—J. E. RHOADS & SONS, Philadelphia, Pa.

240. LEATHER BELTING—Illustrated booklet on how to select, install and maintain leather belting. Efficient transmission performance, with minimum maintenance, and maximum service life described.—SOUTHERN BELTING CO., Atlanta, Ga.

244. TEXACO SPINDURA OILS—Folder on lubrication for all types of spindles, based on actual tests.—TEXAS CO., New York City.

256. METERED LUBRICATION—Bulletin 6A has 12 illustrated pages showing how central lubricating systems are applied to combers, roving frames, winders, knitters, looms, etc.—BIJUR LUBRICATING CORP., Rochelle Park, N. J.

263. NEEDLE ROLLER BEARING—Catalog Engineering and Application Data Edition 52A contains full data on selection of proper Needle Roller Bearings and outlines uses of such in various commodities including textile uses types, Installations, lubrication, etc.—TORRINGTON COMPANY, Torrington, Conn.

265. INTERCHANGEABLE BALL BEARING FOR REPLACEMENT—Charts showing numbers used by manufacturers to identify bearing characteristics, also information on specifications.—NEW DEPARTURE DIV., GENERAL MOTORS CORP., Bristol, Conn.

271. CARDING, SPINNING AND WEAVING LUBRICATION—Informative bulletin describing advantages of NON-FLUID OIL over ordinary lubricants for the lubrication of carding, spinning and weaving machinery.—NEW YORK AND NEW JERSEY LUBRICANT CO., New York, N. Y.

275. HYATT ROLLER BEARINGS — A 16-page bulletin giving details of the application of roller bearings to all types of textile machinery.—HYATT BEARINGS DIV., General Motors Corp., Harrison, New Jersey.

278. SPEED CONTROL—Bulletin 20B6081G describes Textrope variable speed drives. — ALLIS-CHALMERS MFG. CO., Milwaukee 2, Wis.

283. CONTINUOUS OIL GROOVER — Bulletin available describing this unit which provides fast, accurate grooving on bearings of every size and type. Maximum production at a minimum unit cost discussed.—THE WICACO MACHINE CORP., Philadelphia 44, Pa.

290. MOYNO "PROGRESSING CAVITY" PUMPS —Bulletin 50-A describes the adaptability of these pumps to handling dyes, acids, sizing, and other materials used in textiles.—ROBBINS & MYERS, Pump Div., Springfield, Ohio.

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301. JOHNSON ROTARY PRESSURE JOINTS—Bulletin describing the rotary pressure joint which requires no packing, no lubrication and no adjustment, giving installation and maintenance instruction, types, sizes, dimensions and prices. — THE JOHNSON CORP., Three Rivers, Mich.

310. RECORDING GAUGES—Booklet on the "Series 500" line of recording gauges. Complete information on pressure gauges for ranges 0 to 2 inches of water to 0 to 10,000 P.S.I., vacuum gauges, low range draft and pressure gauges, barometers, etc.—THE BRISTOL CO., Waterbury 20, Conn.

311. PIPING POINTERS—Industrial maintenance book covering installation and handling of piping, valves, fittings. Well illustrated, practical tips. — CRANE CO., Chicago, Ill.

314. MOISTURE CONTENT CONTROL — Bulletin F-3158 giving details of features and benefits of moisture equipment control for slashers and textile applications. — BARBER-COLMAN CO., Rockford, Ill.

315. CONTROL INSTRUMENTS FOR TEXTILE PROCESSES—32-page illustrated booklet describing controls for such processes as slashing, dyeing, bleaching, kier boiling, drying, air-conditioning, etc. — MINNEAPOLIS-HONEYWELL INDUSTRIAL DIV., Philadelphia, Penna.

316. HYDRAULIC POWER UNITS—Literature describing hydraulic unit, motor, pump, reservoir, valving a small compact unit for operating of hydraulic calenders, presses, hydraulic controls, etc.—B. F. PERKINS & SON, INC., Holyoke, Mass.

321. RED-RAY BURNERS — Bulletin describing use of Red-Ray Burners in preheating and partial drying to increase capacity of frame.—RED-RAY MFG. CO., New York, N. Y.

324. STROBOTAC—Informative reprint, "Strobotac Boosts Efficiency in Woolen and Synthetic Mills."—GENERAL RADIO CO., Cambridge 39, Mass.

327. PRESSURE REGULATORS—Bulletin P-100 describing equipment for slashers to provide squeeze roll pressures that can be easily adjusted to the correct value for any warps being sized.—NORCROSS CORP., Newton, Mass.

330. TACHOMETER — Bulletin describes 300 models of indicating tachometers for permanent installation showing speeds in R/P/M's, yards per minute, feet per minute, etc., including portable (hand) tachometers. — JONES MOTROLA CORP., Dept. T.I., Stamford, Conn.

333. HOSIERY DYEING — Bulletin 98198 with drawings and illustrations, explains automatic control system for hosiery dyeing based on time and temperature.—TAYLOR INSTRUMENT COS., Rochester, N. Y.

338. TEXTILE PRINTING COUNTERS—Catalog No. 75 illustrating and describing Productimeter Yardage and Printing Counters.—DURANT MFG. CO., Milwaukee 1, Wisc.

CARDING, SPINNING, WINDING . . .

400. THE TRAVELER—Booklet on ring travelers published quarterly with a technical article on spinning and twisting of interest to mill men.—VICTOR RING TRAVELER CO., Providence, R. I.

401. LUMMUS DUSTLESS, STEEL BLENDING FEEDERS—Bulletin describing automatically closing, positively locking door on feeders to prevent overloading, choking. — ALDRICH MACHINE WORKS, Greenwood, S. C.

402. AUTOMATIC CLEANING AND OVERHEAD HANDLING FOR TEXTILE MILLS—24-page bulletin describing the American Monorail Automatic Cleaner for preventing accumulation of lint on spinning, twisting, winding and warping machines. Also for cleaning monitors and card room ceilings.—THE AMERICAN MONORAIL CO., Cleveland, Ohio.

403. WINDING MACHINES—Principles and Practices—This series available in booklet form for those in the industry who desire copies.—UNIVERBAL WINDING CO., Providence, R. I.

404. LAPLESS ENDLESS SPINNER — Bulletin and full information will be supplied on lapless endless spinner and coning belting.—TON-TEX CORPORATION, 16 West 61st St., New York, N. Y.

406. CLEANING AND STRIPPING — Bulletin C. S. 160 describes portable and central high vacuum cleaning and stripping equipment for looms, spinning frames, and cards for cotton, synthetic, and woolens.—NEW ENGLAND MACHINE WORKS, 574 East Main St., Waterbury 16, Conn.

408. CARD GRINDING INFORMATION—Outlines care of grinders, instructions on speed to run grinders, amount of oil to add to machine and other pertinent information.—B. S. ROY & SON CO., Worcester, Mass., and Charlotte, N. C.

412. SERVICE FOLDER — Folder covers textile metal products including spinning and twisting cylinders, card screens, etc.—JENKINS METAL SHOPS, INC., Gastonia, N. C.

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414. WORSTED SPINNING—Bulletin explaining and illustrating Saco-Lowell's new system for worsted spinning, from top to yarn in five economical and efficient stages.—SACO-LOWELL SHOPS, 60 Batterymarch St., Boston 10, Mass.

416. THE BRIEF SAGA OF THE RING TRAVELER—An interesting history relative to the ring traveler, which is in reality the basis of the spinning frame. John Thorpe's invention of ring traveler, the development of the spindle, and the invention of Rabath's Bolster type spindle are covered. — NATIONAL RING TRAVELER CO., Pawtucket, R. I.

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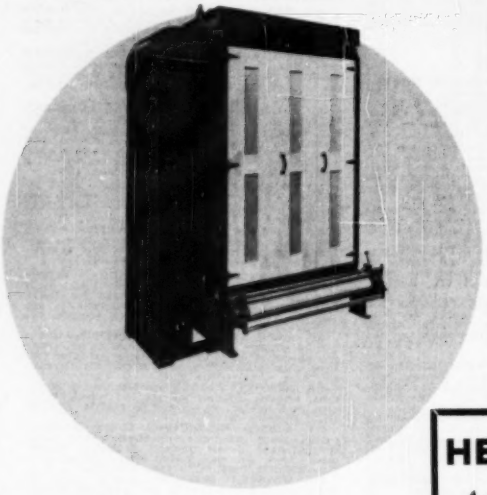

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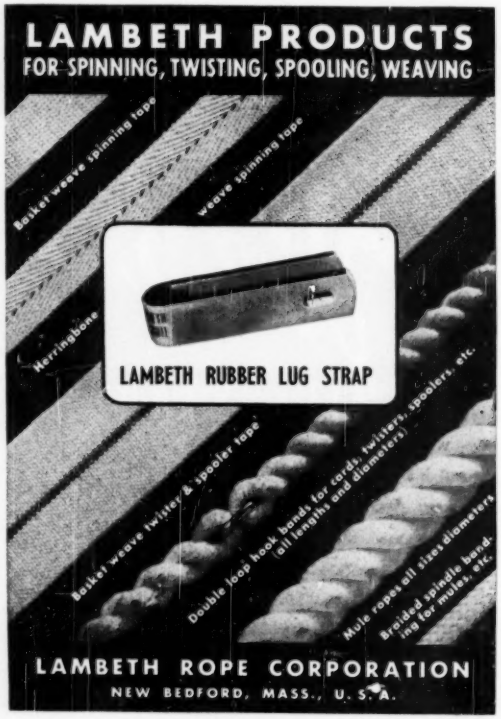
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437. SPINDLE TAPE LACING EQUIPMENT—Circular No. 54 illustrating and describing the Clipper method of joining spindle tapes.—CLIPPER BELT LACER CO., Garne Rapids 3, Mich.

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445. ROLLER BEARING SPINDLES—Illustrated booklet showing various types of Marquette Roller Bearing Spindles. The unique full-floating footstep bearing is pictured in cut-away views, and its advantages are described.—THE MARQUETTE METAL PRODUCTS CO., Cleveland, Ohio.

446. WINDING MACHINES — Principles and Practices is the title of Bulletin No. 339, Part 2 on the No. 44 Roto-Coner is profusely illustrated with exploded view drawings with charts and tables relative to drum winders.—UNIVERSAL WINDING CO., Providence, R. I.

447. CONE WINDER—Form A95 describes the Foster Model 102 winder which produces the Foster knitting cone for spun yarns, warping cones and super drafting cones, twister supply.—FOSTER MACHINE COMPANY, Westfield, Mass.

448. TURBINE LURRICATION—Problem of oxidation, emulsification, foaming and sludging, as related to turbine lubrication discussed in folder entitled "Turbo-Drive".—E. F. HOUGHTON AND CO., Philadelphia, Pa.

484. CARD AND PICKER BEARINGS — Four-page, two-color folder which describes this manufacturer's ball bearings for cards, combers and pickers.—SOUTHERN STATES EQUIPMENT CORP., Hampton, Ga.

486. WARP TYING—Bulletin T-2 on the "Two-In-One" Titan automatic warp tying machine—speed, flexibility efficiency, and economies fully discussed.—EDDA INTERNATIONAL CORP., New York City, New York.

487. DRAWING-IN—Bulletin H.I.-1 on the Titan Automatic Heddle Indicator—eliminates human error in "drawing-in" operation and economies discussed. — EDDA INTERNATIONAL CORP., New York, N. Y.

451. CONICAL RINGS AND FLYERS—Special data available on the Herr conical rings and flyers.—HERR MANUFACTURING CO., INC., Buffalo 2, N. Y.

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WEAVING, SLASHING . . .

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504. LOOM SUPPLIES — Literature describing complete line of straps, strapping, pickers, dobby cords, sticks, binders, bumpers, brake lining and allied products.—E. H. JACOBS NORTHERN DIV., THE BULLARD CLARK CO., Danielson, Conn.

505. SODIUM CELLULOSE SULFATE — Booklet describing this new water soluble cellulose relative to physical properties, toxicity, stability and suggested uses. Advantages as a sizing agent discussed. — TENNESSEE EASTMAN CORP., Kingsport, Tenn.

507. SLASHER PRODUCTION—GN-488, new bulletin on slasher production, describing how quality yarn can be improved through the use of this company's variable speed equipment to automatically control and regulate the speed of the mal.; drive, beam drive and stretch control of the slasher.—REEVES PULLEY COMPANY, Columbus, Ind.

508. LOOM PRODUCTION CHARTS—Convenient celluloid card showing yards per loom per week of 40 hours at various loom speeds.—RALPH R. LOPER CO., Greenville, S. C.

510. THE ROMANCE OF PRAIRIE GOLD—Attractive illustrated book which tells the story of corn and the uses of corn products in industry.—CORN PRODUCTS SALES CO., New York, N. Y.

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515. TEXTILE COUNTER—Catalog No. 50 illustrating and describing complete line of Productmeter Loom Pick Counters; Hank Counters, Yardage, Electric and Predetermined Counters; Tachometers, etc. — DURANT MANUFACTURING CO., Milwaukee 1, Wisconsin.

518. WEAVE ROOM ACCESSORIES—Weave room accessories catalog and literature on new plastic, bronze bearing shoe, which solves a troublesome weave room problem.—KIMMONS LOOM HARNESS COMPANY, Lawrence, Mass.

517. LOADING SYSTEM—Bulletin 417, on pneumatic loading system for Saco-Lowell slasher size box squeeze rolls, contains installation photos, features, specifications, and prices.—THE FOXBORO COMPANY, Foxboro, Mass.

518. NIAGARA TWIST-SETTER—Folder describing the revolutionary Niagara Twist-Setter which has no moving parts. This yarn is sprayed from all sides to afford maximum economy.—SEYDEL-WOOLLEY & CO., Atlanta, Ga.

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529. STRAPPING — Looms and harness strapping, complete line. Full information supplied on request. —TON TEX CORPORATION, 10 West 61st St., New York 23, N. Y.

530. ROTARY UNIONS—New catalog shows how to cut costs, get better sealing, on can dryers, slashers, calenders, etc. Catalog No. 580 entitled "Where Good Connections Count."—PERFECTING SERVICE COMPANY, Atonda Ave., Charlotte, N. C.

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DYEING, FINISHING, CLOTH ROOM . . .

600. BIOLOGICAL ASPECTS OF INSECT DAMAGE TO WOOL—Booklet giving complete picture of insect damage to wool from biological standpoint.—GEIGY CO., INC., New York 13, N. Y.

602. ALUMINUM IN THE CHEMICAL INDUSTRY—Published by Aluminum Company of America. Seventy-eight pages. Text and illustrations covering adaptability of aluminum and aluminum alloys to chemical industry applications and characteristics governing recommended uses. — ALUMINUM COMPANY OF AMERICA, Pittsburgh, Pa.

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607. DYEING OF TEXTILES—Bulletin S-1330 explains how uniform results can be assured if process is temperature controlled. New regulator with electric pilot has indicating thermostat on which settings are changed by turning a knob. Diagrams of system.—BARCO CO., INC., New York City, N. Y.

610. PROCTOR DRYING MACHINERY FOR THE TEXTILE INDUSTRY—Illustrated, descriptive catalog on all types of dryers for raw stock, warps, package dyed and automatic skein yarn. Also includes Preboarding and Automatic Boarding Machines for hosiery.—PROCTOR & SCHWARTZ, INC., Philadelphia, Pa.

61.. STRIPS IN ROLLS—Form No. 17-643 illustrated folder showing over 25 slitters and roll winders for textile use.—CAMERON MACHINE CO., Brooklyn, New York.

615. NICKEL AND ALLOYS—Bulletin T-6 on the resistance of nickel and its alloys to corrosion by caustic alkalies—24 pages containing illustrations and tables to show performance of materials in a variety of baths, including Viscose rayon.—INTERNATIONAL NICKEL CO. INC., New York, N. Y.

617. AUTOMATIC CONTROL SYSTEM FOR CONTINUOUS BLEACHING—Illustrated folder describes the new method of controlling the temperature, pressure, and liquid level in the continuous bleach operations.—TAYLOR INSTRUMENT COMPANIES, Rochester 1, N. Y.

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625. BALL BEARING ROLLER TYPE SCRAY—Circular No. 504 describing the scray which is for use in handling heavy and large size rolls of cloth. This is used either in finishing plants or in the cloth room of cotton mills.—BIRCH BROS., INC., Somerville, Mass.

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632. LUG STRAP WASHERS—Series 1-C illustrated bulletin detailing right and wrong applications and use of washers.—E. H. JACOBS NORTHERN DIVISION, Danielson, Conn.

633. PRINTING WITH ARIDYE PIGMENT COLORS—Bulletin P-1 describes preparation and application of pigment, water-in-oil emulsions for printing cotton, rayon, and other fabrics.—INTERCHEMICAL CORP., TEXTILE COLORS DIV., Hawthorne, N. J.

638. ROTARY DYEING MACHINE—Booklet No. 425 illustrating the features of these stainless steel machines used for dyeing hosiery, hats, gloves, socks, etc.—SMITH, DRUM & CO., Philadelphia 34, Pa.

DYESTUFFS, CHEMICALS, SOAPS . . .

701. MAGNESIUM APPLICATIONS—Case history information on magnesium applications in the textile field, published bi-monthly with latest developments in the magnesium industry.—DOW CHEMICAL CO., Midland, Mich.

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762. **ONYX TECHNICAL DATA SHEETS**—Two new data sheets describing the use, advantages, and applications of Xyno Resins # 69 and Xyno Resin 3862.—ONYX OIL & CHEMICAL COMPANY, Jersey City 2, N. J.

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773. **TECHNICAL CHEMICAL DATA SHEETS**—Complete set for dyeing, printing and finishing operations, showing major operations, performance and advantages.—ONYX OIL & CHEMICAL CO., Jersey City 2, N. J.

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780. **HYDROGEN PEROXIDE** — Compilation of physical data and properties of hydrogen peroxide. Reaction listed in organic and inorganic chemistry along with applications.—BECCO SALES CORP., Buffalo, N. Y.

KNITTING . . .

801. **THE WILDMAN SINGLEHEAD FULL-FASHIONED HOSIERY MACHINE** — Literature on request from the WILDMAN MFG. CO., Full-Fashioned Division, Norristown, Pa.

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1007. **OVERHEAD HANDLING EQUIPMENT**—56 pages of illustrations showing successful applications of monorail systems to meet every kind of handling problem. — THE AMERICAN MONORAIL CO., Cleveland, Ohio.

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1027. **SINGLE-BEAM CRANES**—Bulletin No. 130 describing and illustrating the single beam type of overhead traveling crane.—SHEPARD NILES CRANE AND HOIST CORP., Montour Falls, N. Y.

1030. **C-D HOLLOW WARE**—This 32-page catalog, B-11, profusely illustrated in color, shows Continental-Diamond's line of boxes, trucks, cans, barrels, baskets and trays. Complete description and specifications are given on each item.—CONTINENTAL-DIAMOND FIBRE CO., Newark 98, Del.

MISCELLANEOUS . . .

1101. **AUTOMATIC BOBBIN REFINISHER**—A descriptive bulletin illustrating and describing method of refinishing thrower bobbins on an reduction schedule.—J. M. NASH COMPANY, 2300 N. 30th St., Milwaukee, Wis.

1102. **BALING PRESSES**—An illustrated folder describing this manufacturer's complete line of balers for all materials, Both Downstroke and Upstroke models.—ECONOMY BALER CO., Ann Arbor, Mich.

1103. **UNBRAKO SCREWS**—Illustrated 16-page booklet No. 570 gives data on Unbrako hollow set screws, with knurled point, self-locking features. Includes miscellaneous screw and locking nut data.—STANDARD PRESSED STEEL CO., Jenkintown, Pa.

1104. **INTERPRETATION OF ANALYSIS** — In compiling this brief collection of terms which most frequently appear in analysis of surface active chemicals, an attempt has been made to explain as clearly as possible the meaning of these terms to those who have had little or no chemical training. —NOPCO CHEMICAL CO., Harrison, N. J.

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1116. **PERMACEL** — "Industrial Tapes for the Textile Industry" is the title of a 4-page folder describing the uses of pressure sensitive tapes in the Textile Industry.—INDUSTRIAL TAPE CORP., New Brunswick, N. J.

1117. **CUSTOM MADE THREAD GUIDES**—Illustrated booklet describing uses and physical properties of the "AlSiMag" line of Thread Guides. Advantages fully discussed with picture and specifications of each type. — AMERICAN LAVA CORP., Chattanooga 5, Tenn.

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SUPPLIERS' NEWS

WHAT THEY ARE DOING

Headquarters of **Bijur Lubricating Co.**, formerly in Long Island City, N. Y., have been moved to Rochelle Park, N. J.

William A. Sipprell, Jr., president of the **H & B American Machine Co.** has moved to Charlotte, N. C., and will have his headquarters at 524 4th Street, Charlotte. He will, however, spend a portion of his time at the company offices in Pawtucket, R. I. William E. Conlon, previously manager of the Charlotte office, has been made head office sales and service

Mr. Smyth

manager, with headquarters at Pawtucket. Mr. Conlon has been replaced in Charlotte by Ellison A. Smyth, formerly with the Berkeley Mills in Balfour, N. C. Ray L. McCauley is assistant branch manager.

Crane Co., Chicago, Ill., has announced the appointment of J. W. Greene to the newly created post of assistant manager of the valve and fitting department.

The **Warner Electric Brake and Clutch Co.**, Beloit, Wis., has appointed Roger H. Brown, Union, N. J., eastern sales manager of the firm's ICB division. New York sales, formerly handled by Mr. Brown, will henceforth be taken care of by R. C. Wiard and W. E. Gregg, with headquarters at 101 South Main Street, Middletown, Conn.

William E. Nash has been appointed export sales manager of **Hemphill Co.** and general assistant to Benjamin R. Ebersman, vice-president and sales manager of the firm. Richard M. Sacher will handle sales in the Middle Atlantic States and serve as liai-

A 90-Day Baby Sends You . . .

Christmas Greetings

Just three months old but going strong—a new company, under the direction of Lynn Holloway (formerly with Meadows Mfg. Co.), is ready to serve you.

Call on us for any of the following

HOMCO PRODUCTS

• PULLEY DRIVES • BALL BEARING IDLER PULLEYS
• CYLINDER BEARINGS AND JOURNALS • BALL BEARING JACK STUDS
• SEPARATORS • CHAIN DRIVES
• BALL BEARING APPLICATIONS FOR THE CARD ROOM

HOLLOWAY MANUFACTURING CO.

Phone FR. 2311 • AM 1331

1155 VICTORY DR., S.W. ATLANTA, GA.

Are You Getting a Fair Day's Work for a Fair Day's Pay?

As Production Engineers we specialize in the utilization of

LABOR — EQUIPMENT — MATERIAL

Our list of clients reads like the Blue Book of American Manufacture, and in our files are many expressions as to our service and results accomplished, like the following:

"They have done an outstanding job for us. I consider them as the outstanding organization in this field."

A GREAT FULLY INTEGRATED TEXTILE MILL

Write for a free copy of "Labor and Management Benefit by Industrial Engineering Principles."

AMERICAN ASSOCIATED CONSULTANTS, Inc.

D. S. KEOGH, President — **J. J. SKELLY, Vice Pres. and Gen. Mgr.** — **H. B. CRAFT, Vice President** in Charge of Southern Operations

250 PARK AVENUE, NEW YORK 17, N. Y. — GRANT BUILDING, PITTSBURGH, PA. — 30 CAMDEN ROAD, ATLANTA, GA.

PENICK & FORD, LTD., INCORPORATED

CORN STARCHES, DEXTRINES, GUMS, CORN SUGARS & SYRUPS

NEW YORK, N. Y. - - - - CEDAR RAPIDS, IOWA

SOUTHERN OFFICES: ATLANTA, GA. - - - - SPARTANBURG, S. C.

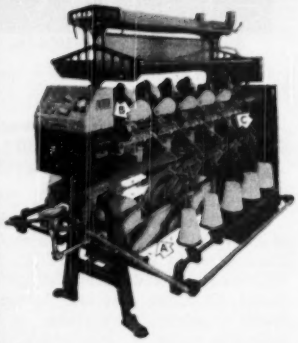
John:
Why not let the Penick & Ford Textile Laboratory in Atlanta check specifications on that cloth?
Jim

new patented invention....

SURCO-5 CONDITIONING

Highlights

(1) Perfect yarn conditioning now possible on most conventional yarn winders.
(2) Conditions entire surface of package layer by layer and not the individual thread.
(3) Replaces accurately any amount of moisture lost in previous operations.
(4) Surco*-5 also lubricates — hence produces a better running yarn in all subsequent processing such as warping, knitting, weaving, etc.
(5) Electronic controls permit operating of winder either with or without Surco-5.



We guarantee perfectly homogeneous distribution of moisture throughout the yarn package.

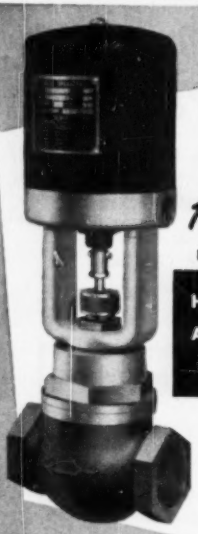
Ask for Pamphlet 1052

*Reg. U. S. Pat. Off.

KMC KEARNY MANUFACTURING CO., INC.
Kearny, N. J. — Greenville, S. C.
Authorized agents all over the world

BARBER COLMAN

Automatic Controls FOR HEATING • VENTILATING AIR CONDITIONING and PROCESS WORK



Write for Bulletin F2287-2

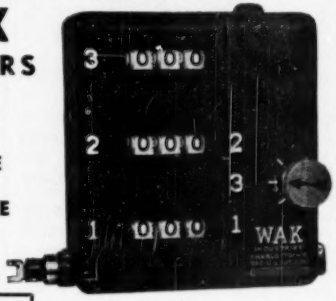
TYPICAL BARBER-COLMAN MOTOR-OPERATED VALVE

BARBER-COLMAN COMPANY
ROCKFORD, ILL. • BOSTON, MASS. • GREENVILLE, S. C. • GREENSBORO, N. C.
46 Years Serving the Textile Industry

OVER 500 MILLS COUNT ON

*WAK COUNTERS

★ RUGGED
★ ACCURATE
★ DEPENDABLE
★



We Build to Your Specifications
Hank Clocks
Rotary Counters
Tenter Counters
Inspection Counters
Pick Counters
Twister Clocks
Hosiery Counters
Pairing Counters
Yardage Counters
Slasher Counters
Sewing Counters
Special Counters
Reset, Non-reset—Single or Multiple Shift

Join the hundreds of smart mill operators who count on WAK for greater economy, extra years of service. Investigate the durability features of WAK Counters, and discover for yourself how they cut down repair and replacement costs.

See Our Representative, Or Inquire Direct

WAK INDUSTRIES CHARLOTTE, N. C.

*T.M. Reg. U. S. Pat. Office

son man with hosiery buying offices and sales representatives in New York City. Hemphill's offices in the Empire State Building, New York City, and in High Point, N. C., have been enlarged to include completely equipped machine show rooms.

Paul H. Farmer has been appointed by **Foster Machine Co.**, Westfield, Mass., as sales coordinator of Foster-

Mr. Farmer

Muschamp machines exclusively. With headquarters in Westfield, Mr. Farmer will be available for consultations regarding the use and operation of these machines.

Moreland Chemical Co., Spartanburg, N. C., has announced the appointment of W. F. Crowell, Jr., to its sales staff. Mr. Crowell was formerly with Colgate-Palmolive-Peet Co.

Eugene Ward, associated with **Cameron Machine Co.**, Brooklyn, N.

Mr. Ward

Y., for thirteen years, has been appointed general sales manager.

Karl H. Inderfurth has resigned as promotional manager at **Universal Winding Co.** It is understood that Mr. Inderfurth plans to open his own business in Charlotte, N. C., representing a number of machinery and chemical concerns.

The Reliance Electric & Engineering Co. recently appointed John L. Fuller as technical coordinator, with responsibility for engineering coordination of special drives, technical investigations, analysis of special projects, and direction of the experimental program. Charles R. Sutherland is now manager of engineering for the firm's Ivanhoe Division products; and Earl C. Barnes has been made manager of engineering for the Ashtabula Division products.

Osborne Bezanson has resigned his position as vice-president of Monsanto Chemical Co. to become president and a member of the board of directors of **Chemstrand Corp.**, a synthetic fiber manufacturing unit jointly owned by American Viscose Corp. and Monsanto.

Carolina Roller Shop Inc., Lincolnton, N. C., engaged in repairing and recovering rollers, has moved to new quarters on N. Aspen Street. The firm is managed by Odell Harvey.

The Calco Chemical Division of **American Cyanamid Co.** has announced the appointment of David T. Cornfoot as assistant to the manager of the Boston office, and W. E. Small as assistant to the manager for the Providence office. Cameron Mackenzie now has the newly created position of coordinator of certain activities between the Calco plant in New Jersey and the Boston and Providence sales offices.

Charles D. Denton, associated with **Weston Electrical Instrument Corp.**, Newark, N. J., since 1925, was recently appointed advertising manager.

Robert N. Pennie was recently added to the research staff of **Amalgamated Chemical Corporation's** research laboratory in Philadelphia, Pa.

Monsanto Chemical Co. has revealed plans for an expansion program at its Texas City operations which, when completed, will total approximately $30,000,000.

Hardy, Hember & Co., Chicago, Ill., has been appointed Chicago area representative for **Chaffee Design and Manufacturing Co.**, East Aurora, N. Y., designers and builders of special production and packaging machinery.

Paisley Products, Inc., Chicago, Ill., has opened a sales and technical service office at 825 West Morehead St., Charlotte, N. C. The new office will provide coverage for North and South

Speed Up
Your Old Equipment
with New Load-Floating
Colson Casters
Rolling equipment that doesn't roll easily reduces efficiency and profits in your mill. There are 1458 standard Colson casters—many designed especially for Textile mills. They roll easily over all floors, swivel freely, are rust-resistant. Many models have thread guards. Colson also manufactures a wide range of trucks for the Textile Industry—hand trucks, platform trucks, box trucks, drum and barrel trucks and special devices. Write us or consult your phone book for the local Colson office.
Model 3-427-16 with thread guards, designed especially for the Textile Industry.
Write Today For Free 68 Page Catalog
THE COLSON CORPORATION
ELYRIA, OHIO
CASTERS • • LIFT JACK SYSTEMS • • INDUSTRIAL TRUCKS

Specified by textile leaders for 69 years

HUBINGER

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THIN BOILING STARCH

• Always uniform • Always dependable
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The services of our technicians are always available without obligation.

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Here's an Easy Way to Prevent Dry-Air Damage

IT may be that slime and scale build-up in water-ways of your humidifying system is causing costly dry-air damage in your mill.
Have our local Oakite Technical Service Representative check your system for this possibility. Have him remedy the situation with fast-working Oakite slime-remover and scale-dissolver. Have him show you the low-cost Oakite procedure for *preventing* slime and scale build-up in Oakite cleaned and conditioned water-ways.
Or write us direct for the Oakite "66" Digest which describes cleaning and conditioning of humidifying equipment, including filters, plus 65 other important mill maintenance cleaning jobs. Write Oakite Products, Inc., 26C Thames Street, New York 6, N. Y.

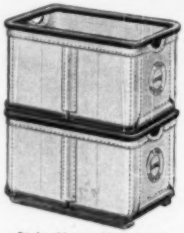
SPECIALIZED INDUSTRIAL CLEANING

OAKITE

MATERIALS • METHODS • SERVICE

Technical Service Representatives in Principal Cities of U. S. & Canada

Gone the old yarn-storage bin.



Style 21 stacking type

LANE

Canvas Boxes

Doff—wind—condition—store.
Function from spindle to loom.
No more dumping into splintery bins.
Just tier up boxes till needed.
Save waste—Save labor.

Write for Catalog No. 1-50

W. T. LANE & BROS., Inc.
Manufacturers
Poughkeepsie, N. Y.

Fletcher

SINCE 1850 • PIONEERS IN
TEXTILE EXTRACTORS
NARROW FABRIC LOOMS
THROWING MACHINERY

FLETCHER WORKS

225 GLENWOOD AVE. PHILADELPHIA 40, PA

TESTED IS TRUSTED

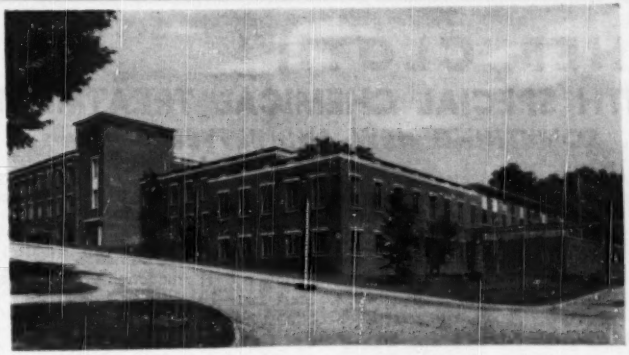
MODEL X Tensile Tester

One of the many *Scott Testers for "World-Standard" testing of textiles, plastics, rubber, paper, wire, plywood, up to 1 ton tensile.

SCOTT TESTERS

*Trademark

SCOTT TESTERS, INC.
60 Blackstone St., Providence, R. I.



PART OF TEXACO'S RESEARCH EXPANSION PROGRAM

A new brick-faced building, to increase by approximately 40% the facilities of the Beacon, N. Y., Laboratories of The Texas Company, was recently completed. This is part of the firm's ten-year research expansion program which will encompass all of the firm's 28 research and quality control laboratories.

Carolina, and parts of Virginia, Georgia, and Tennessee.

John Richardson, vice-president and sales manager of **Hunt Machine Works** since 1949, has resigned, according to a recent announcement. Mr. Richardson's future plans are not known **as yet.**

Albert H. Clem, formerly assistant manager of sales in the special chemicals department of **Pennsylvania Salt Manufacturing Co.**, has been appointed to the newly created post of assistant to the vice-president in charge of sales. Horace F. McIntyre, formerly Philadelphia district sales manager for the Special Chemicals department, is now product supervisor for the department. He is succeeded by John M. Davidson, previously sales service representative in the Pittsburgh district.

Thomas W. Oliver, Jr., formerly with Textron, Inc., and before that with Bachmann Uxbridge Worsted Corp., is now associated with **Reeves Bros., Inc.**

The board of directors of **Oscar Kohorn & Co., Ltd.**, has elected as vice-presidents Reginald A. Morse and Emil G. Glauber. Mr. Morse has been with the firm since 1945; Mr. Glauber since 1921.

Two new members have been elected to the board of directors of **E. F. Houghton & Co.**: D. C. Miner, advertising manager who joined the firm in 1934, and William K. Barclay, Jr., Philadelphia resident partner of Stein Bros. & Boyce.

W. C. Nairn, vice-president, celebrated his fiftieth anniversary with the **Emmons Loom Harness Co.**, Lawrence, Mass., on October 1.

Davis E. Williams, Jr., has joined **Belton C. Plowden Co.**, Griffin, Ga., as sales representative in the territory of Georgia, Alabama, and Tennessee.

Mr. Williams

A new $5,000,000 solvent extraction unit has been completed recently at the **A. E. Staley Manufacturing Co.** plant in Decatur, Ill. The unit has a capacity for processing 800 tons of soybeans daily.

Gus A. Binz, associated with Sarco Co., Inc., for the past twenty years, is establishing himself as an independent advertising agent, effective November 1. His address after that date will be **Gus Binz Associates**, 332 Springfield Ave., Summit, N. J. After

HALLOWELL

Steel Collars

HALLOWELL Solid Steel Collars, functionally proportioned throughout . . . precision-machined so faces run perfectly true . . . are beautifully polished all over . . . yet they cost less than common cast iron collars. 3" bore and smaller are made from Solid Bar Stock. To make sure the collar won't shift on the shaft, they are fitted with the famous UNBRAKO Knurled Point Self-Locking Socket Set Screw—the set screw that won't shake loose when once tightened. HALLOWELL . . . a "buy word" in shaft collars . . . available in a full range of sizes for IMMEDIATE DELIVERY!

Write for name and address of your nearest HALLOWELL and UNBRAKO Industrial Distributors.

STANDARD PRESSED STEEL CO.

JENKINTOWN 24, PENNSYLVANIA

DON'T SHARE PROFITS WITH PESTS

INDUSTRIAL

SANITATION SERVICES

Inspection—Consultation

Maintenance

- Complete Pest Control
- Industrial Fumigation
- Bonded Termite Control

OFFICES IN 20 STATES

ORKIN

EST. 1901

HOME OFFICES: 591 Peachtree, N. E.

Atlanta, Georgia

ORR SLASHER CLOTH
. . . . WITH SPECIAL CHEMICAL TREATMENT
SOMETHING NEW AND BETTER

Slasher Cloth is an important maintenance item in a cotton mill. With the introduction of ORR *Slasher Cloth with Special Chemical Treatment*, many of the problems which have pestered the slasher room foreman have been eliminated.

The slasher room foreman, in order to satisfy the superintendent and the cost department, must have available a *Slasher Cloth* which will:—

1. Dress the yarn properly.
2. Hold its width. No shrinkage.
3. Maintain level production performance.
4. Start fast—last long.

ORR *Special Treated Slasher Cloth* maintains uniform dressing properties, resists bacteria and steam degradation, maintains dimensional stability.

Discuss your *Slasher Cloth* problem with your ORR representative.

Industrial Woolens by Orr

STARTS FAST—
LASTS LONGER

DISTRIBUTED BY

J. S. FALLOW & CO.
279 Union St.
New Bedford, Mass.

OLIVER D. LANDIS
718 Queens Rd., Charlotte 7, N. C.
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P. W. COLEMAN
Box 1393
Greenville, S. C.

MANUFACTURED BY

THE ORR FELT & BLANKET CO.
PIQUA, OHIO, U. S. A.

AMONG THE MEN IN THE MILLS . . .

America's LEADING Textile Journal

Textile Industries leads in reader preference of mill executives, as was shown in the most recent impartial survey, throughout the most dominant section of the industry. Ranked first with a total greater than the next two publications combined.

Textile Industries leads all other textile publications in total mill circulation in the United States.

Textile Industries leads all national textile publications in percentage of mill circulation. 86% of T. I.'s total paid is among production, management and operating men actually in the mills.

TEXTILE INDUSTRIES
806 Peachtree St., N. E., Atlanta 5, Ga.

January 1 the new organization will take over Sarco's advertising account.

D. J. Murray Manufacturing Co. has moved its Chicago offices to 612 North Michigan Avenue. O. J. Malina, sales manager of the unit heater division, is in charge of the office.

A new concern, **Production Publications,** has been formed by Abraham Abrams, and is located at 175 Fifth Avenue, New York, N. Y. Mr. Abrams was formerly advertising manager at Supreme Knitting Machine Co., Inc., Brooklyn, N. Y. Production Publications will specialize in the preparation and production of instruction handbooks, parts catalogs, etc.

Food Machinery and Chemical Corp. has announced that Gerald F. Twist has been elected a vice-president. Mr. Twist is manager of the firm's Peerless Pump Division.

Rostan Machinery and Equipment Co., textile machinery sales agents, have announced removal of their offices to 1 William St., Suite 1000, New York 4, N. Y.

E. M. Maxwell has been appointed president and D. G. Rogers executive vice-president of the National Aniline Division of **Allied Chemical & Dye Corp.,** New York. B. A. Ludwig,

Mr. Maxwell

Mr. Daigneault

president until his retirement on October 1, died on October 8 at Westfield, N. J. He had been with the firm since 1918. Succeeding Mr. Maxwell as director of domestic sales of the National Aniline Division is H. J. Daigneault, previously manager of the New England territory.

Southern Reneedling Works, Inc., Gastonia, N. C., has moved to enlarged quarters at 627 E. Franklin Ave. This plant is equipped to handle re-pinning of woolen, worsted, and synthetic pin-drafting machines.

Chemstrand Corp., jointly owned by Monsanto Chemical Co. and American Viscose Corp., has plans for construction of a multi-million dollar plant for the manufacture of a new synthetic fiber. The plant will be erected near Decatur, Ala. It has also been announced that Chemstrand will begin the operation of a synthetic fiber semi-production plant at Marcus Hook, Pa., for production of a million pounds of synthetic fiber staple annually.

Synthron, Inc., manufacturing chemists of Ashton, R. I., have appointed Claude O. Witze industrial and public relations manager. Before coming with Synthron, Mr. Witze was associated with the Providence (R. I.) Journal.

Remington Rand Inc., New York, N. Y., has announced the appointment of M. George Bastianello as assistant sales manager of its business service departments. Mr. Bastianello was previously associated with the New York office of Statistical Tabulating Co.

takes more to make a
SHAMROCK
...but they wear...and WEAR!

Canvas Baskets, Hampers, Trucks

Made in many standard sizes—or in special sizes and styles to suit your need. *Write for complete catalog!*

Ask your Jobber.

MEESE, Inc.
227 Miller Road, Madison, Ind.

PORTABLE
HUMIDITY RECORDER

Check humidity conditions in various parts of your mill with Bristol's handy Portable Humidity and Temperature Recorder.
Used in hundreds of textile mills to give a continual, visual picture of humidity and temperature. Easily carried, set on table, or hung on wall.
Immediate delivery from stock.

BRISTOL

A COMPLETE LINE OF AUTOMATIC CONTROLLING AND RECORDING INSTRUMENTS FOR TEXTILE MILLS

THE BRISTOL COMPANY
157 Bristol Road
Waterbury 20, Conn.
Please send Bulletin on Portable Humidity and Temperature Recorder.
Name_____
Company_____
Address_____
City_____ State_____

CLASSIFIED ADS

BUSINESS—EMPLOYMENT—EQUIPMENT—PROFESSIONAL CARDS—OPPORTUNITIES

CLASSIFIED RATES

Rates are net, payable in advance each month. Page is 3 columns, 10 inches deep—30 inches to page. Space measured by even inch vertically by 1, 2 or 3 columns in width. Column width 2⅛ inches.
Transient rate for display classified, $8.00 per inch.
Contract rate for space within 12 months period as follows:

	Per Inch		Per Inch
12 inches	$7.50	48 inches	$6.75
24 inches	7.25	96 inches	6.50
36 inches	7.00	180 inches	6.00

POSITION WANTED: 10c per word per insertion; minimum charge $2.00. Cash with order. Box Number address care of TEXTILE INDUSTRIES, 806 Peachtree St., N. E., Atlanta 5, Ga., count as eight words. Advertisements for help wanted, equipment for sale, for rent or wanted, and professional cards are accepted at display rates only.

POSITIONS OPEN—MEN WANTED: We can place superintendent worsted yarn mill; weaving supt. for So. Amer.; superintendent for large southern cotton mill; superintendent of carding for carded and combed, white and colored yarns, large plant; overseer cotton spinning and overseer cotton carding for large mills running white and colored, carded and combed yarns; overseer cotton-rayon weaving large mill C. & K. and Draper looms; package dyer $400-500 mo.; asst. cotton dyer; fixer woolen automatic looms for foreign country.

LIST YOUR CONFIDENTIAL APPLICATION WITH US

We will keep you informed of attractive positions open in the textile mills.

CHARLES P. RAYMOND SERVICE, INC.

294 WASHINGTON STREET Phone: Liberty 2-6547 BOSTON 8, MASS.

SPECIALISTS IN PLACING TEXTILE MILL EXECUTIVES

DYESTUFFS

Will buy your surplus and obsolete dyes and chemicals for cash.

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Charlotte, N. C.
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Washington, D. C.

WANTED

One stainless steel dye beck preferably four string capacity. Advise description, location, and price. Pee Dee Textile Co., Inc., Rockingham, N. C.

The Machinery Man
EGAN
Known Everywhere

Announces...

LIQUIDATION AT PRIVATE SALE

of the HANOVER WOOLEN MILLS

Hanover, Illinois

Consisting of: 48" Sargent Wool Scouring Bowls, Preparatory Equipment, Riggs-Lombard S/S Raw Stock Dye Tubs, Proctor & Schwartz Stock Blending Unit, 4 Sets 60x60 All-Iron D&F Cards with 120-end tape (NEW), 1 Soutex 60x60 Wool Card with 120-end tape, 2¼" gauge Mules, Model 44 Universal Roto-Coner, Worcester Warp Hy-Speed Spoolers with Creels, Dressing Frames, 12 C&K W-3 All-Purpose 92" Automatic Looms, 68 C&K 92" Box Looms M/D recently reconditioned, Riggs-Lombard Cloth Carbonizing Unit max 72" width with Acid Tank 72"x18", R-L Pneumatic Squeeze Rolls and Scutcher, Complete Finishing Plant Wet and Dry, Mill Supplies, Card Clothing, Bobbins, Loom Parts, Belting, Shafting, Hangers, Motors, Complete Machine Shop and Carpenter Shop Equipment and Small Tools.

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"The Machinery Man Known Everywhere"

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WRITE! WIRE! PHONE!

At the Plant:
HANOVER, ILL.
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(IMMEDIATE DELIVERY)

650—DRAPER X LOOMS
Goods 42"

98—DRAPER XK LOOMS
Goods 44"

78—DRAPER XK LOOMS
Goods 50"

12—DRAPER XK LOOMS
Goods 54"

106—DRAPER E LOOMS
Goods 46"

12—DRAPER MODIFIED D
Goods 68"

24—W2 WORSTED LOOMS
Goods 90"

8—WOONSOCKET CARDS
40"
12" Coilers
27" Doffers

ALL LOOMS MOTORIZED

All Orders Subject To Prior Sale

FYANS & LIST
MACHINERY CO., INC.
P. O. Box 454 • Phone 2-4769
FALL RIVER, MASS.

KNITTING MACHINES

NEW — USED — REBUILT

Scott & Williams, Banner, Brinton, Reading, Lieberknecht—all types for full fashioned, seamless and circular mills. A complete line of dyeing and finishing equipment.

MORRIS
SPEIZMAN
COMPANY, INC

STOCK READY FOR IMMEDIATE DELIVERY

7—#7 Sturtevant Fans, Ball Bearing
6—40" Kitson Finisher Pickers
2—40" Kitson 2-beater Single Process, Aldridge Synchronizer
6—#6 Kitson Condensers
2—#101 Foster Winders, Double Motors, 100 spindles each, equipped for cones
8—#90 Universal Winders, 20 spindles ea., Overend Tensions, Bunch Builders, Motor driven, 550 volts
4—Whitin Ribbon Lap Machines
1—Whitin Sliver Lap Machine

. . . PARTIAL LISTING — LET US KNOW YOUR NEEDS . . .

WILSON LEWITH MACHINERY CORPORATION
Post Office Box 4100 — Warehouse: Wilkinson Blvd.
CHARLOTTE, N. C. — Phone 4-2403 — Behind Barbeque Lodge

COMPLETE sales representation available for Georgia and Alabama thru practical and technical salesman. Wide acquaintance thru five years continuous coverage of territory. Record of past sales submitted as reference. Worthwhile accounts solicited. Reply to Box No. 417, TEXTILE INDUSTRIES, 806 Peachtree Street, N. E., Atlanta 5, Ga.

WANTED

Loom Fixers with experience on Model E and Model X Draper Looms. Answer — Texas Textile Mills, Box 301, McKinney, Texas.

SALES REPRESENTATIVE

Thoroughly familiar with spinning and weaving problems of a technical nature. Currently employed calling on mills in the South. Will consider acting as manufacturers' agent for one or two top notch lines. I know the people who buy and can guarantee best contacts in the Textile Industry. Reply to Box No. 418, TEXTILE INDUSTRIES, 806 Peachtree St., N. E., Atlanta 5 Georgia.

FOR SALE

Two Waldron spreader guiders suitable for material up to 40" wide. Reply to Box No. 419, TEXTILE INDUSTRIES, 806 Peachtree Street, N. E., Atlanta 5, Georgia.

FOR SALE

10—Luther Two Brush Thread Dressers, with 98 spindle Take-Up Frames
1—Brabender Semi-Automatic Moisture Tester, Type FD, with weighing Scale
STANDARD MILL SUPPLY CO.
P. O. Box 1534 — Providence 1, R. I.

SALESMAN WANTED

Well Established Textile Chalk and Crayon Manufacturer wants a man in South to solicit additional mill business and service present Southern customers. Those interested may carry allied lines. Please reply to Box No. 421, TEXTILE INDUSTRIES, 806 Peachtree Street, N. E., Atlanta 5, Ga.

YOUR ADVERTISEMENT ON THIS PAGE

will produce results at small cost. Do you desire a position? Do you desire a good man to fill a vacancy in your mill? Do you desire your business or professional card placed before the textile industries?

Why not try an advertisement on this page of TEXTILE INDUSTRIES? Its 20,500 copies per month reach the textile executives, superintendents and heads of departments throughout the industry.

Note the rates and send in your advertisement today.

TEXTILE INDUSTRIES
806 Peachtree St., N. E.
Atlanta 5, Georgia

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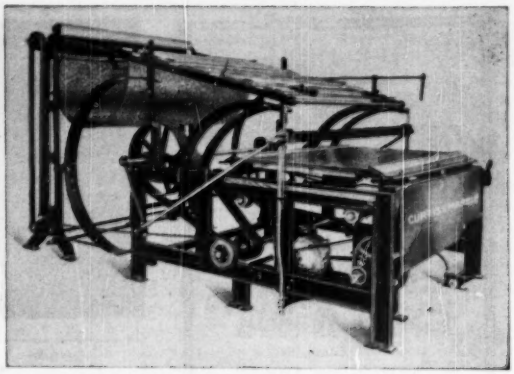

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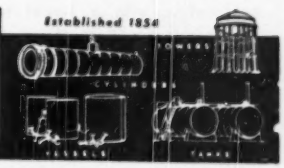

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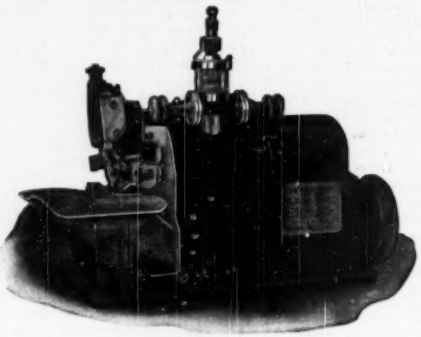

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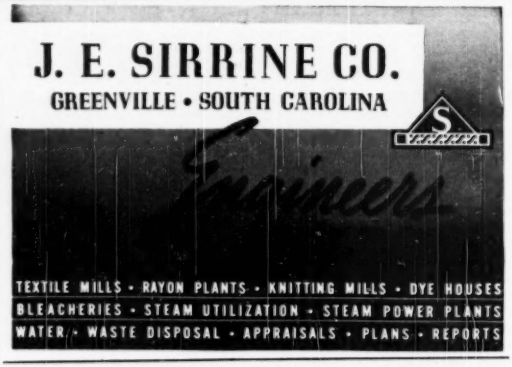

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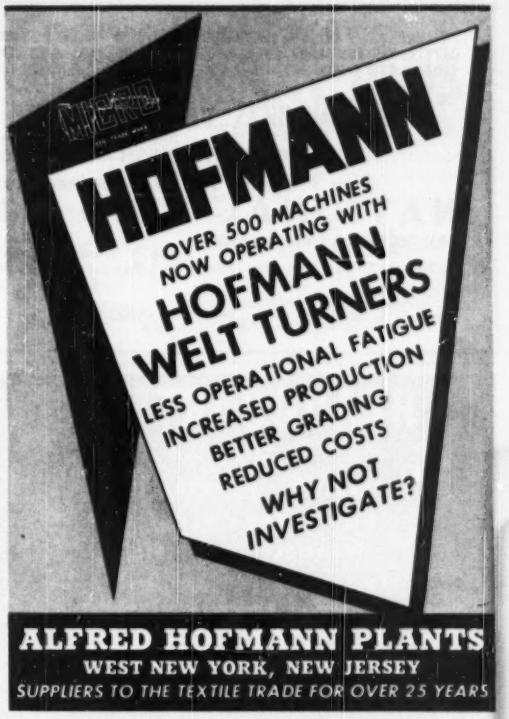

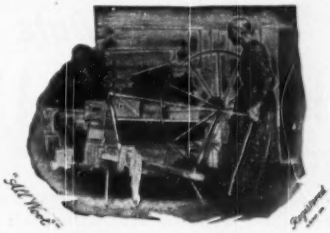

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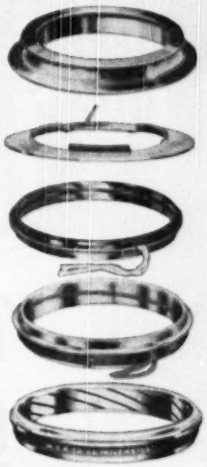
Remember these—

PRODUCTION AIDS



REDUCED RINGS
— for spinning smaller package without rail or holder change. Expanded Rings similarly available.

PLATEHOLDER BUSHING
— to change from warp to filling rings, using same holders.

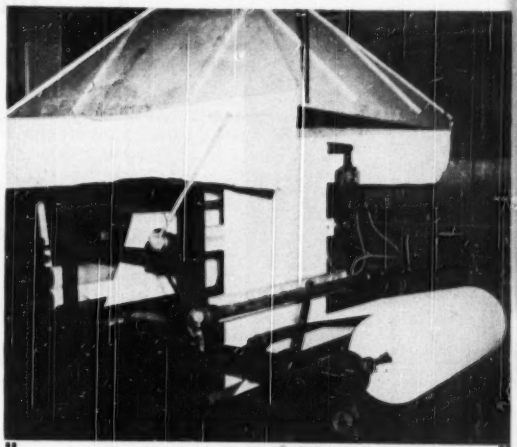
EADIE SPEED RINGS
— bringing new standards of oil-lubricated high speed operation to wool and worsted spinning, and numerous twisting operations.

M-G GREASE RING
— another Eadie design permitting several doffs between hand greasings. Avoids hazards of greasing with partially filled bobbin in place.

WHITINSVILLE (MASS.) SPINNING RING CO.

DIAMOND FINISH

Makers of Spinning and Twister Rings since 1873



RED-RAY BURNERS

INSTALLED ON SINGEING MACHINE GIVE BETTER AND FASTER SINGE. REDUCE COSTS.

Write for bulletins

RED-RAY MANUFACTURING COMPANY, INC.

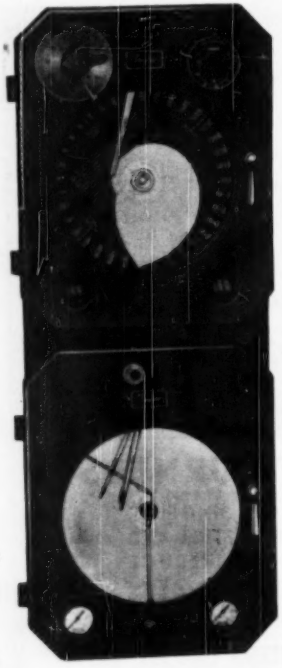
455 W. 45th Street — New York 19, N. Y.

Taylor-controlled piece dye kettle at Perry Knitting Company, Perry, N. Y.

"NOW WE GET LEVEL PIECE DYEING thanks to Taylor Control!"

Says: **PERRY KNITTING COMPANY**

Taylor FULSCOPE* Time Schedule Temperature Controller for piece dyeing, package dyeing, beam dyeing, skein dyeing, top dyeing.



THESE kind words from Mr. G. M. Traber, President-Treasurer, Perry Knitting Company of Perry, N. Y., refer to the new, completely flexible Taylor Time Schedule Temperature Controllers on their piece dye kettles. Perry Knitting is one more satisfied customer who has found that Taylor Automatic Control means better dyeing at lowest cost.

Piece dyeing, package dyeing, beam dyeing, skein dyeing or top dyeing can be automatically Taylor-controlled according to fully adjustable time and temperature schedules. And this Taylor control will save you money at least four important ways:

1. **By assuring uniform dyeing conditions.**
2. **By cutting operating costs.**
3. **By preserving quality of dyed fabric.**
4. **By eliminating expensive human error.**

Operator pushes a start button and Taylor Time Schedule Controller (left) takes over. Then (a) steam enters dye kettles. (b) Rise rate, hold temperature, hold time are controlled according to pre-determined schedules. (c) Precise dyeing temperatures are held during entire cycle. Signal lights indicate various stages of cycle.

For complete details, ask your Taylor Field Engineer. And be sure to write for **Bulletin 98199**—it gives you the whole story on how Taylor cuts woolen and worsted processing costs.

Taylor Instrument Companies, Rochester, N. Y., or Toronto, Canada. *Instruments for indicating, recording and controlling temperature, pressure, humidity, flow and liquid level.*

*Registered Trade-Mark

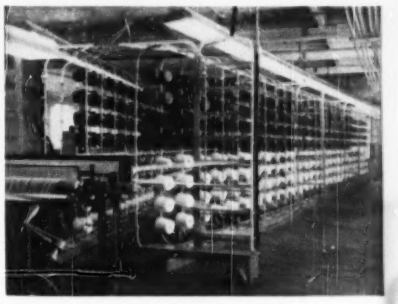
TAYLOR INSTRUMENTS MEAN ACCURACY FIRST

Mc BRIDE **TEXTILE EQUIPMENT NEWS**

PUBLISHED BY EDWARD J. McBRIDE CO., INC. • 1398 ADAMS AVENUE • PHILADELPHIA 24, PA.

PROMINENT WOOLEN AND WORSTED MANUFACTURER

CUTS WARPING COSTS 30% WITH McBRIDE MAGAZINE CREEL



The new McBride SRM Magazine Creel shown here installed in a leading Pennsylvania woolen manufacturing plant has cut warping costs by 30%, more than doubled warping speeds and solved a number of production problems for the company.

THE OLD METHOD involved the use of small, forty end creels for the transfer of the yarn onto jack-spools. These jack-spools were placed in a creel and reeled onto the beaming frame, then in turn to the loom beam.

This method caused a number of additional problems, including the necessity for frequent end tying requiring time and leaving knots in the warp. The maximum speed obtainable was 80 to 150 yards per minute. Two to three hours were required for set-up of a new pattern – all lost time from a production viewpoint.

The use of different types and sizes of yarn packages was difficult and frequently involved an additional winding operation.

PROBLEM:

- Cut cost.
- Increase warping speeds.
- Speed pattern changes.
- Eliminate down time.

WITH THE NEW McBRIDE MAGAZINE CREEL a full run can be made without the necessity for end tying and with the very minimum of down time.

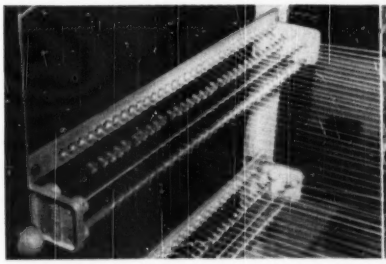
Speeds of from 250 to 400 yards per minute are regularly obtained and it is the belief of the superintendent that speeds over twice this could be consistently run with lighter yarns.

SOLUTION:

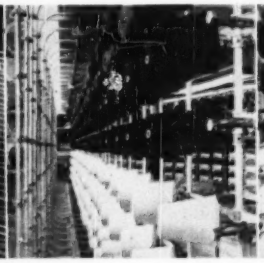
- Warping costs cut 30%.
- Speed more than doubled.
- Pattern changes easier, faster.
- Down time practically eliminated.

Pattern changes are now accomplished much more rapidly than formerly. The McBride magazine features permit a complete new pattern to be set up on the creel while the preceding pattern is being run.

Special revolving spindle helps speed tying of transfer tail to new package.



1. New improved McBride electromagnetic stop motion stops warper instantly in case of yarn break. The two-way signal lights enclosed in a steel channel for maximum protection speed location of broken ends.



2. Note the adequate ballooning space, giving easy access to packages for the creeler.

3. Every McBride SRM Magazine Creel is engineered to fit the specific requirements of the yarn and the plant's physical layout. Numerous columns would have prevented erection of sufficiently large creel by conventional means.

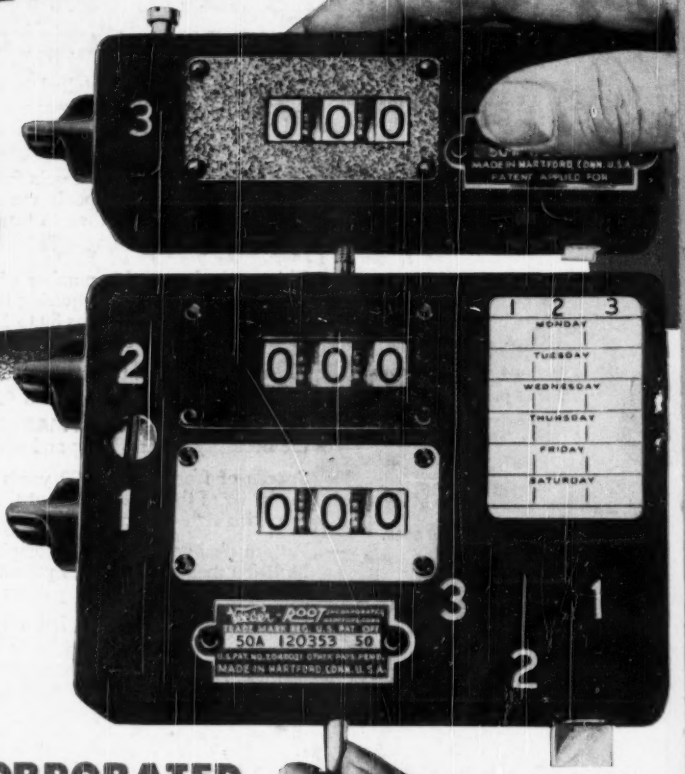
COMPLETE ENGINEERING SERVICE IS PART OF EVERY McBRIDE INSTALLATION

CREELS *for every purpose,* WARP BEAMS • FLANGES • ROLLS **Mc BRIDE**

For Factory-Expert Sales Engineering and Dependable Service . . . Call

VEEDER-ROOT

on any counting question



2-3 Convertible Pick, Hank, Yardarge and Knitting Machine Counters . . . plus all other types of textile counters, for every type of machine . . . factory-trained and field-seasoned sales engineers who can cope with any counting problem . . . plus ample facilities for service and repair (facilities which will soon be expanded into the finest service of its kind in the South) . . . these are the advantages you can count on, *when you count on Veeder-Root Counters.* Get in touch today!

VEEDER-ROOT INCORPORATED

"Counting House of the Textile Industry"

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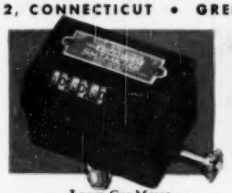
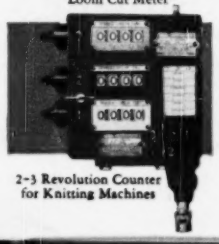
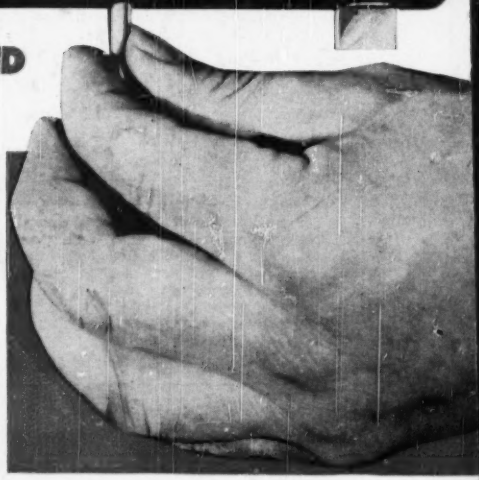
World's Most Complete Line of Textile Counters . . . . . all these and scores of other types . . . Send for Catalog T-48



Loom Cut Meter

2-3 Convertible Hank Counter



2-3 Revolution Counter for Knitting Machines

Linear Counter with Double Wheels